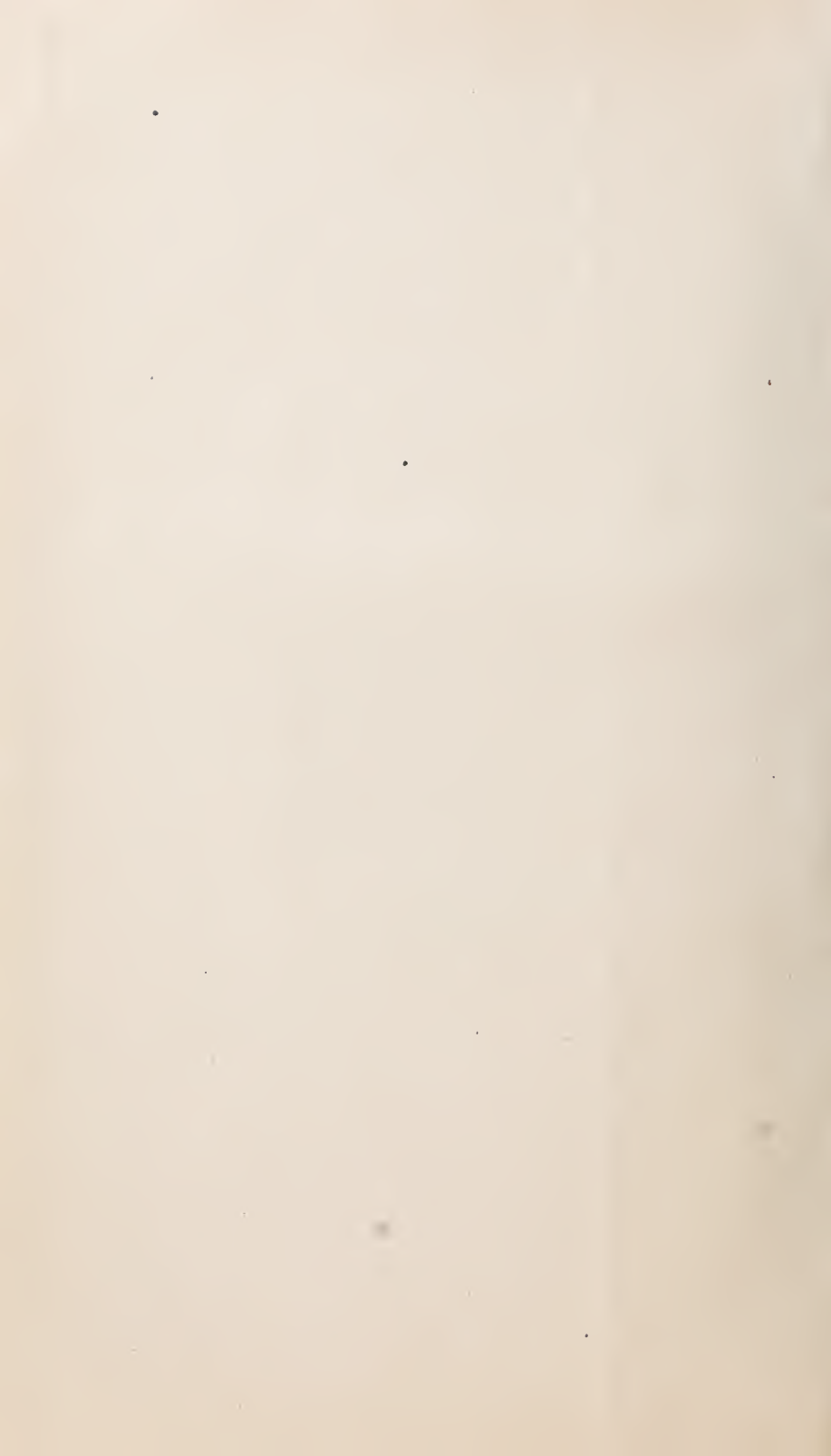




Class HD8039

Book T25 U5

1910



INVESTIGATION OF TELEPHONE COMPANIES

LETTER FROM THE SECRETARY OF COMMERCE AND
LABOR TRANSMITTING, IN RESPONSE TO A SENATE
RESOLUTION OF MAY 28, 1908, A REPORT SHOWING THE
RESULTS OF AN INVESTIGATION MADE BY THE BU-
REAU OF LABOR INTO TELEPHONE COMPANIES EN-
GAGED IN THE CONDUCT OF INTERSTATE BUSINESS

FEBRUARY 24, 1910

Referred to the Committee on Interstate Commerce and
ordered to be printed, with illustrations

WASHINGTON
GOVERNMENT PRINTING OFFICE
1910



INVESTIGATION OF
TELEPHONE COMPANIES

45-9
565

LETTER FROM THE SECRETARY OF COMMERCE AND
LABOR TRANSMITTING, IN RESPONSE TO A SENATE
RESOLUTION OF MAY 28, 1908, A REPORT SHOWING THE
RESULTS OF AN INVESTIGATION MADE BY THE BU-
REAU OF LABOR INTO TELEPHONE COMPANIES EN-
GAGED IN THE CONDUCT OF INTERSTATE BUSINESS

FEBRUARY 24, 1910

Referred to the Committee on Interstate Commerce and
ordered to be printed, with illustrations

WASHINGTON
GOVERNMENT PRINTING OFFICE
1910

HD 8039
J25 115
1910

APR 23 1910
D. OF D.

21

LETTERS OF TRANSMITTAL.

DEPARTMENT OF COMMERCE AND LABOR,
OFFICE OF THE SECRETARY,
Washington, February 23, 1910.

SIR: In pursuance of Senate resolution No. 205 of the Sixtieth Congress, first session, directing an investigation by this department of the telegraph and telephone companies, I have the honor to transmit herewith a report showing the results of an investigation made by the Bureau of Labor into the telephone companies engaged in the conduct of interstate business as to their methods of business, wages paid, etc. This report supplements the report forwarded some time since, which related to the Western Union and Postal Telegraph-Cable companies, and which was published as Senate Document No. 725, Sixtieth Congress, second session.

Respectfully,

CHARLES NAGEL,
Secretary.

HON. JAMES S. SHERMAN,
President of the Senate, Washington, D. C.

DEPARTMENT OF COMMERCE AND LABOR,
BUREAU OF LABOR,
Washington, February 23, 1910.

SIR: In accordance with your instructions this bureau undertook the investigation directed by Senate Resolution No. 205 of the Sixtieth Congress, first session, with regard to telegraph and telephone companies. The results of that investigation, so far as the telegraph companies are concerned, have been embodied in a report which was forwarded some time ago, but it has not been possible to prepare the present report for transmission at an earlier date.

I now have the honor to transmit a report on telephone companies, which embodies the results of the investigation so far as they relate to such companies. The planning and conduct of the field work have been done by Special Agent Ethelbert Stewart, and the text of the report herewith transmitted has been largely prepared by him. The planning and preparation of the tables accompanying the report have been under the direction of Mr. Charles E. Baldwin, of the statistical division of the bureau.

I am, very respectfully,

CHAS. P. NEILL,
Commissioner.

The honorable the SECRETARY OF COMMERCE AND LABOR,
Washington, D. C.

1861

1862

1863

1864

1865

1866

1867

1868

1869

1870

CONTENTS.

	Page.
LETTERS OF TRANSMITTAL.....	3
CHAPTER I.—GENERAL DISCUSSION OF CONDITIONS IN TELEPHONE COMPANIES.....	7-113
Scope of the investigation.....	9-12
Housing of exchanges.....	12-15
Equipment.....	15, 16
Organization of the labor force.....	17-19
Application and entrance examination.....	19-22
Training schools.....	22-24
Working shifts or tricks and hours of labor for operators.....	24-28
Working hours and hours of labor.....	28-38
Character and severity of the work.....	38-76
Description of telephone work.....	39-44
Up reach and side reach on switchboard.....	45-48
Length of service of operators.....	48-54
Team work.....	54, 55
Supervision.....	55
The public and the operator.....	56, 57
Time limit for making connections.....	57-59
Breaking point of efficiency.....	59-76
Presents and preferential calls.....	75-78
Strikes and telephone operators' unions.....	78
Care for health of operatives and welfare work.....	78-84
Wages.....	84-97
Rates charged for service.....	97; 98
General summary and review.....	98-113
CHAPTER II.—ANALYSIS OF TABLES.....	115-120
CHAPTER III.—GENERAL TABLES.....	121-322
Table I.—Employment and working conditions in specified telephone companies, as reported by officials of the companies.....	123-150
A.—Location and size of operating rooms and air space per person..	123-127
B.—Time allowance for handling calls, plug connections per hour, length of overtime day and rate paid, minimum age of employees, and wages at beginning work.....	128-131
C.—Shifts required, companies providing night alarms and in which overtime work is optional and holidays and vacations granted.	132-135
D.—Rates charged for telephone service.....	136-144
E.—Distribution of operators, original calls, and average calls per operator during each hour of the day.....	145-150
Table II.—Working conditions in specified telephone companies, as reported by special agents.....	152-155

CHAPTER III.—GENERAL TABLES—Concluded.

Page.

Table III.—Summary of employment and working conditions in telephone companies, as reported by employees..... 156-169

A.—Occupation, sex, length of employment in telephone service, and age of employees at entering service..... 156-159

B.—Lunch time, relief, and number of employees working overtime. 160-163

C.—Length of overtime day, choice of exchange and hours of work, health, care of operating set, and number of employees who live at home or board and who ride or walk to work..... 164-169

Table IV.—Summary, for all telephone companies, of employment and working conditions, as reported by employees..... 170-179

A.—Occupation, sex, length of employment in telephone service, and age of employees at entering service..... 170, 171

B.—Lunch time, relief, and number of employees working overtime. 172-175

C.—Length of overtime day, choice of exchange and hours of work, health, care of operating set, and number of employees who live at home or board and who ride or walk to work..... 174-179

Table V.—Rates of wages and earnings of employees in certain telephone companies during a pay-roll period in 1908, as reported by officials of the companies..... 180-322

A.—Classified rates of wages and hours of labor, by occupations.... 180-273

B.—Summary, for telephone systems, of classified rates of wages and hours of labor, by occupations..... 274-301

C.—Number and per cent of employees whose earnings during their respective pay-roll period were less, equal to, or greater than full-time earnings at specified rates..... 302-317

D.—Summary, for telephone systems, of number and per cent of employees whose earnings during their respective pay-roll period were less, equal to, or greater than full-time earnings at specified rates..... 317, 318

E.—Number and per cent of operators, by classified wage groups... 319-322

Appendix A.—Forms of schedules used in telephone investigation..... 325-332

Appendix B.—Specimen of first lessons in telephone operating..... 333-340

CHAPTER I.

GENERAL DISCUSSION OF CONDITIONS IN TELE-
PHONE COMPANIES.

CHAPTER I.

GENERAL DISCUSSION OF CONDITIONS IN TELEPHONE COMPANIES.

SCOPE OF THE INVESTIGATION.

This report on telephone companies is the result of an investigation conducted by the Bureau of Labor, by direction of the Secretary of Commerce and Labor, in accordance with Senate Resolution No. 205 of the Sixtieth Congress, first session, requiring the Secretary of Commerce and Labor "to institute an investigation into all the telegraph and telephone companies engaged in the conduct of an interstate business as to the methods used in handling the public's business, the wages paid telegraphers, telephone operators, and other employees of such companies, and the working conditions of the employees thereof, together with a statement of the receipts and expenditures of such companies for a period of five years." The report on telegraph companies was presented in Senate Document No. 725, February 16, 1909.^(a)

Reports were received from 27 companies reporting operations in 26 States.^(b) The companies are presented under three groups: The Bell Telephone System, the Independent Telephone Companies, and the American Telephone and Telegraph Company.

The first group comprises the following companies: The Bell Telephone Company of Missouri, including the various exchanges located in the city of St. Louis, Mo., and its suburbs, also East St. Louis, Ill.; The Bell Telephone Company of Philadelphia, covering various exchanges of the city and its suburbs; The Central District and Printing Telegraph Company, Pittsburg, Pa., city and suburban exchanges; Central Union Telephone Company, Indianapolis, Ind.; Chesapeake and Potomac Telephone Company, Baltimore, Md., and Washington, D. C.; Chicago Telephone Company, Chicago, Ill., its city and suburban exchanges, including the exchanges in Waukegan, Evanston,

^a The schedules used in collecting the information here presented were known as B. L. 429, 430, 433, and 435, and are given in Appendix A, pp. 325 et seq. of this report.

^b The States from which reports were received were Alabama, California, Colorado, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Missouri, Nebraska, New York, North Dakota, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Virginia, and Washington, and the District of Columbia.

and Aurora, Ill.; The Cincinnati and Suburban Bell Telephone Company, including its city and suburban exchanges; Citizens' Telephone Company, Covington, Ky.; Cleveland Telephone Company, Cleveland, Ohio; Colorado Telephone Company, Denver, Colo.; Cumberland Telephone and Telegraph Company, Louisville, Ky., Nashville, Tenn., and New Orleans, La.; The Missouri and Kansas Telephone Company, embracing the city and suburban exchanges of Kansas City, Mo., with its division having headquarters at Armstrong, Mo., Topeka, Kans., and Wellington, Kans., which includes 5 towns of 25,000 population and over and 91 smaller cities and towns located in various sections of Missouri and Kansas; Nebraska Telephone Company, Omaha, Nebr.; New England Telephone and Telegraph Company, covering the central district of the company embracing the exchanges of Boston, and various suburban cities and towns; New York Telephone Company, including the exchanges of Greater New York; Northwestern Telephone Exchange Company, Minneapolis, Minn., embracing the exchanges of Minneapolis, Minn., St. Paul, Minn., and the divisions located at Fargo, N. Dak., Sioux Falls, S. Dak., Red Wing, Minn., and Anoka, Minn., these latter divisions including 23 cities and towns having a population less than 25,000; Ozark Bell Telephone Company, including exchanges at Springfield, Mo., Aurora, Mo., and Republic, Mo.; Pacific Telephone and Telegraph Company of San Francisco, Cal., Los Angeles, Cal., Portland, Oreg., and Seattle, Wash.; Rocky Mountain Bell Telephone Company, Salt Lake City, Utah; Southern Bell Telephone and Telegraph Company, Atlanta, Ga., Birmingham, Ala., and Richmond, Va., and the Southwestern Telegraph and Telephone Company of Dallas, Tex.

Establishment schedules were received from the following independent companies: Maryland Telephone Company, Baltimore, Md.; Kansas City Home Telephone Company, Kansas City, Mo.; Louisville Home Telephone Company, Louisville, Ky.; and the Keystone Telephone Company of Pennsylvania, Philadelphia, Pa.

Establishment schedules were also received from the different divisions of the American Telephone and Telegraph Company, located in Boston, Mass., Chicago, Ill., Cincinnati, Ohio, Kansas City, Mo., Minneapolis, Minn., New York, N. Y., Philadelphia, Pa., and St. Louis, Mo.

These data relate to 32 cities of 25,000 population and over and 126 smaller cities and towns.^(a)

^a Of cities of 25,000 population and over data are included from the following: Atlanta, Ga., Baltimore, Md., Birmingham, Ala., Boston, Mass., Chicago, Ill., Cincinnati, Ohio, Cleveland, Ohio, Covington, Ky., Dallas, Tex., Denver, Colo., Indianapolis, Ind., Joplin, Mo., Kansas City, Mo., Los Angeles, Cal., Louisville, Ky., Minneapolis, Minn., Nashville, Tenn., New Orleans, La., New York, N. Y., Omaha, Nebr., Philadelphia, Pa., Pittsburg, Pa., Portland, Oreg., Richmond, Va., St. Joseph, Mo.,

Schedules were secured covering employees in the operating force and showing their general distribution into day, evening, and night shifts; whether "A" board operators or "B" board operators, etc. Pay-roll data secured included 39,586 employees. Of these 17,210 were female operators working at the switchboards.

Originally employing only men and boys, the telephone business has become one of the largest employers of women and girls, men and boys retaining their hold (outside of mechanical occupations and skilled trades) only on late night shifts in a few localities.^(b)

HOUSING OF EXCHANGES.

Generally speaking, the telephone exchanges covered by this investigation were well housed, had ample space, were well lighted, and, judged by our present very questionable standards of ventilation,

St. Louis, Mo., St. Paul, Minn., Salt Lake City, Utah, San Francisco, Cal., Seattle, Wash., Topeka, Kans., Washington, D. C.

Of the cities and towns under 25,000 included, 61 are in Kansas, 17 in Minnesota, 42 in Missouri, 5 in North Dakota, and 1 in South Dakota, as follows:

Kansas—Abilene, Andale, Anthony, Arkansas City, Atchison, Attica, Baileyville, Belle Plaine, Bern, Burns, Caney, Cedarvale, Chanute, Chautauqua, Clinton, Coffeyville, Cottonwood Falls, Council Grove, Dexter, Elgin, Elmdale, Erie, Eudora, Eureka, Fairmount, Florence, Fort Scott, Frontenac, Garnett, Gas, Grantville, Harper, Hutchinson, Iola, Kelly, Lawrence, Leavenworth, Lecompton, Madison, Marion, Merriam, Mount Hope, Neodesha, Olathe, Oneida, Ottawa, Parsons, Peabody, Peru, Pittsburg, Sabetha, St. Paul, Sedan, Sedgwick, Seneca, Valley Center, Weir, Wellington, Wichita, Williamsburg, Winfield.

Minnesota—Albert Lea, Anoka, Austin, Brainerd, Crookston, Excelsior, Faribault, Little Falls, Mankato, Northfield, Owatonna, Red Wing, St. Cloud, Stillwater, White Bear Lake, Willmar, Winona.

Missouri—Armstrong, Aurora, Blue Springs, Boonville, Brookfield, Carrollton, Carterville, Carthage, Fayette, Fulton, Glasgow, Glenwood, Grain Valley, Greenwood, Hannibal, Higbee, Independence, Jefferson City, Kirksville, Lancaster, Lees Summit, Marceline, Marionville, Maryville, Monett, Monroe City, Mount Vernon, Nevada, New Franklin, Odessa, Paris, Pierce City, Pleasant Hill, Republic, Sedalia, Seligman, Smithville, South St. Joseph, Springfield, Stotts City, Warrensburg, Webb City.

North Dakota—Fargo, Grafton, Grand Forks, Jamestown, Wahpeton.

South Dakota—Sioux Falls.

^b According to a report of the Bureau of the Census on "Statistics of women at work, 1900" (pp. 158, 163-166), there were 21,999 females 16 years of age and over employed as telephone and telegraph operators in 1900, distributed by nativity as follows: Both parents native-born white, 12,018, or 54.6 per cent; one or both parents foreign-born white, 8,611, or 39.1 per cent; foreign-born white, 1,357, or 6.2 per cent; negro, Indian, and Mongolian, 13, or 0.1 per cent. Probably most of the foreign born and those of foreign-born parentage are employed as telegraph rather than telephone operators, because of the fact that any accent or peculiarity of pronunciation or speech is a practical bar to employment in the telephone business.

According to the same report (p. 36), of these 21,999 women 71.1 per cent were from 16 to 24 years of age, 22.6 per cent from 25 to 34, 4.4 per cent from 35 to 44, and 1.3 per cent from 45 to 54; 92.7 per cent were unmarried or their conjugal condition unknown, 4.1 per cent were married, and 2.7 per cent were widowed. From an unpublished re-

were fairly well ventilated. Of the 178 operating rooms for which reports were received from the companies, 23 were on the first or ground floor of the building occupied, 55 were on the second, 33 on the third, 20 on the fourth, 11 on the fifth, 14 on the sixth, 9 on the seventh, 6 on the eighth, and 3 on the ninth, while for 4 no report was made as to floor occupied.

In no case did the air space of operating rooms fall below 247 cubic feet per person, and in instances it went as high as 3,000 cubic feet of air space per person. Cubic feet of air space is recognized now as a very inadequate measure of conditions. Quite as important a test is the frequency with which the volume of air, be it large or small, is changed. The whole subject of ventilation is being reconsidered, former standards abandoned and methods revolutionized.

Even on the former lines of workshop construction as to ventilation and air space there was no very satisfactory standard for

port of the Bureau of the Census on "The telephone" for 1907 the following statement relative to officers and employees has been prepared. All female employees, including supervisors, monitors, ticket clerks, switchboard operators, etc., have been classified in the Census bulletin as "operators, female."

NUMBER OF EMPLOYEES IN INDEPENDENT COMMERCIAL AND MUTUAL TELEPHONE SYSTEMS AND IN THE BELL AND AMERICAN TELEPHONE AND TELEGRAPH COMPANIES.

Occupation.	Number of employees in—			Total employees.
	Independent companies.		Bell and American telephone and telegraph companies (175 subsidiary companies).	
	Commercial (4,726 systems).	Mutual (363 systems).		
SALARIED EMPLOYEES.				
Officers of corporation.....	2,036	194	324	2,554
Superintendents, general managers, etc. (a).....	3,578	105	5,003	8,686
Clerks and bookkeepers.....	2,306	40	11,712	14,058
Total salaried employees.....	7,920	339	17,039	25,298
WAGE-EARNERS.				
Operators:				
Male.....	2,032	144	1,400	3,576
Female.....	26,522	985	49,131	76,638
Total operators.....	28,554	1,129	50,531	80,214
All other wage-earners (b).....	10,151	265	28,241	38,657
Total wage-earners.....	38,705	1,394	78,772	118,871
Grand total (all occupations).....	46,625	1,733	95,811	144,169

^a Including exchange managers, electricians, draftsmen, and experts.

^b Comprising foremen, inspectors, solicitors, collectors, linemen, wiremen, battery men, messengers, trouble men, and laborers.

The average annual wages of the 76,638 female operators shown in the table amounted to \$301.31. No data in regard to employees were obtained from the 17,702 rural or farmers' telephone systems reporting.

sufficiency of air space, since city ordinances and state laws ranged in their requirements from 225 to 500 cubic feet per person.^(a)

No operating room was found which fell below the minimum; 16 exchanges were found housed in rooms containing less than the usual maximum of legal requirements as shown in the following table.^(b)

EXCHANGES IN WHICH AVERAGE AIR SPACE PER PERSON IS LESS THAN 500 CUBIC FEET.

City.	Exchange.	Average cubic feet of air space per person.
BELL TELEPHONE SYSTEM.		
Anoka, Minn. ....	.....	480. 0
Atlanta, Ga.	Main—Long distance.	476. 1
Chicago, Ill.	Central.	247. 2
Chicago, Ill.	Harrison.	402. 8
Chicago, Ill.	Humboldt.	354. 0
Chicago, Ill.	Oakland.	445. 2
Cleveland, Ohio.	Main—Suburban.	416. 6
Denver, Colo.	Main.	405. 3
Kansas City, Mo.	Fairmount.	320. 8
Los Angeles, Cal.	Main.	354. 7
New Orleans, La.	Main.	490. 7
Pittsburg, Pa.	Toll office.	481. 9
INDEPENDENT COMPANIES.		
Kansas City, Mo.	Baltimore avenue.	364. 3
AMERICAN TELEPHONE AND TELEGRAPH CO.		
Chicago, Ill.	Long distance.	249. 0
Cincinnati, Ohio.	Long distance.	397. 0
New York, N. Y.	Long distance.	470. 5

In practically all operating rooms no means of ventilation is provided save windows and doors. The most striking exceptions to this will be taken up under another head.^(c) The operating rooms personally inspected by agents of the Bureau during the investigation showed sufficient ventilation in all but 5 cases, and in the "B" room of one of these it was good.

There was sufficient natural light by day in all but 4 cases. There were but 2 cases reported of insufficient light at night.

Of the exchanges personally examined by agents, 9 were on the first or ground floor, 18 on the second floor, 14 on the third, 7 on the fourth, 1 on the fifth, 2 on the sixth, 7 on the seventh, 4 on the eighth, 3 on the ninth, 1 on the second and third, 2 on the second and

^aAn Illinois statute approved June 4, 1909, provides that factories, mercantile establishments, mills, and workshops shall have at least 2,000 cubic feet of air space per employee, with outside windows and doors the area of which is at least one-eighth of the area of the floor; otherwise artificial ventilation shall be provided.

^bRecent legislation in New York (1907) requires 250 cubic feet of air space per employee in factories, and in addition that the owner shall provide and maintain proper means of ventilation, and in case of his failure to do so the commissioner of labor shall order such ventilation to be provided. For fuller discussion of ventilation of telephone operating rooms, see pages 79 to 81 of this report.

^cSee page 79.

fourth, 1 on the third and fourth, 1 on the third and fifth, 1 on the fourth and fifth, and 2 on the sixth, seventh, and eighth.

Of the 73 exchanges reported upon by agents of the bureau, it was found that 33 of those which were located above the first floor were not provided with elevators for use of employees. Of these exchanges 15 were located on the second floor, 10 on the third floor, and 6 on the fourth floor; 1 was located partly on the second and partly on the fourth floor, and 1 partly on the third and partly on the fourth floor. The maximum number of operators required, through lack of elevators, to climb one flight of stairs was 60; those required to climb two flights of stairs numbered 108; while 75 found it necessary to climb three flights of stairs.

In connection with the above analysis of the data from agents' personal observations as to the use of elevators by employees, it may be well to consider the schedules obtained from individual operators. Of the 427 individual employees interviewed, 333 worked in exchanges located above the first floor. The following table shows the floor upon which the exchanges in which they worked were located, and the number who did not use the elevators going to and from their work. That is to say, while 83 of those interviewed worked on the second floor, 70 did not use the elevators; of 47 working on the fourth floor, 44 did not use the elevators; there were 17 who worked above the first floor but did not report the specific floor upon which they worked, and of these 12 did not use the elevators.

ELEVATOR SERVICE FOR INDIVIDUAL EMPLOYEES.

Floor on which located.	Total employees.	Employees not using elevator.	Floor on which located.	Total employees.	Employees not using elevator.
Second.....	83	70	Second and fourth.....	11	.....
Third.....	56	15	Third and fourth.....	6	6
Fourth.....	47	44	Third and fifth.....	3	.....
Fifth.....	8	.....	Fourth and fifth.....	6	.....
Sixth.....	19	.....	Fifth and sixth.....	2	.....
Seventh.....	19	.....	Seventh and eighth.....	7	.....
Eighth.....	1	.....	Not reported.....	17	12
Ninth.....	40	.....		
Second and third.....	8	8	Total.....	333	155

Of the 76 specific complaints made by the operatives interviewed, 51, or more than two-thirds, related to the matter of the use of elevators; sixteen of these individual complaints were to the effect that there were no elevators in the buildings, and twenty-five were that the elevators did not run daily at the hours when the employees must go to or return from their work or on Sundays.

Toilet facilities were reported ample, with due regard to privacy of approach in all cases.

The entrance to buildings in which operating rooms were located was from public streets sufficiently lighted, except in the case of three exchanges, two of which were in a Pennsylvania city and one in an Illinois city.

In 23 of the 64 exchanges inspected by agents of the bureau, and located above the first floor of the buildings in which they were housed, there were no fire escapes provided. Of these 23 cases the operating room was on the second floor in 12 instances, in 4 on the third floor, in 3 on the fourth floor, and in 1 each on the sixth, seventh, eighth, and ninth floors.

In a few cases these exchanges were housed in buildings believed to be fireproof and in which the city building regulations did not require fire escapes.

Wash rooms were provided in all operating rooms except one, while rest rooms for female employees were found in all cases.

EQUIPMENT.

Telephone equipment consists, first, of the switchboard and those parts of the complicated apparatus which are housed in the operating room, collectively known as the exchange. Since 10,000 lines constitute the practical limit of convenient operation of a "central" or exchange, the larger cities have more than one exchange. The second division of equipment comprises the wires connecting the subscribers' telephones with the central exchange. The third division consists of the individual telephones inside the homes or offices of the subscribers. Practically no data relating to the second and third divisions of equipment were secured for this report.

Switchboards are of two types, the magneto and the common battery. The magneto board, which was in common use up to ten or twelve years ago, has of late years been generally superseded by the common battery board. With the magneto type of switchboard it was necessary to place a dry battery with each subscriber's telephone. The subscriber generated the current necessary to call the central by turning a little crank attached to his telephone each time he wished to call. This operated a drop, a small metallic shutter, on the central switchboard which attracted the attention of the operator. These dry batteries were constantly giving out, especially if at any one time they were subjected to a heavy demand, such as having a large list of numbers to call in rapid succession; and they had other drawbacks that were objectionable where extensive use of the telephone was desired.

For the common battery switchboard system all the current necessary is generated at the central exchange. No crank has to be

turned in making calls. When the receiver is lifted from the hook, the upward spring of the hook starts a current which flashes a light on the central switchboard corresponding to the number of the telephone, and is a notification to the operator that the user of that number wishes to make a call. This light is automatically extinguished when the desired connection is made, and reappears when the conversation is ended as a notice to the operator to disconnect the telephones of the conversing parties.

With the magneto type of board the operator replaces the metallic drop with her hand, often having to make several efforts to do so. The time saved by the common battery switchboard is considerable when a large number of calls has to be registered, as the time for a call on the magneto board required 10 seconds for a first or single call, while from 15 to 20 seconds were necessary for a recall or the securing of a second number immediately upon the close of conversation with a former one. With the common battery system both call and recall can be made on an average of five seconds.

The life of the magneto board was about 10 years; that of the common battery is from 12 to 15 years.

Of the 458 exchanges covered by this report, 105 had magneto and 353 common battery switchboards. Since it will be necessary to go into more detail on the subject of switchboard construction and manipulation in considering the working speed rate of operatives, it is deemed unnecessary to say more here.

Outside equipment, so far as it affects immediately the subject of efficiency of service, relates primarily to the aerial and underground cables, i. e., to the matter of wires.

Originally single wires were strung, and these were added to up to the capacity of the poles to carry the wires, sleets and snowstorms occasionally causing such wreckage as to put the entire system out of commission for days at a time. Outside, or wire, conditions, especially after the introduction of electric lighting and trolley-car service, became a source of incessant annoyance. The first attempt to solve the problem of "cross talk" over the telephones was to string two twisted wires instead of a single wire. Next, these pairs of twisted wires were put in bundles or sheaths called cables, and strung at first overhead, afterwards largely underground. In 1896 a 50-pair cable was manufactured, i. e., one containing 100 single wires, and was hailed as the final achievement along that line. The size of cables, however, grew to 200, 400, and 600 pairs, until in Chicago cables carrying 900 pairs or 1,800 single wires have been laid.

Corresponding improvements in the transmitting instruments have been made.

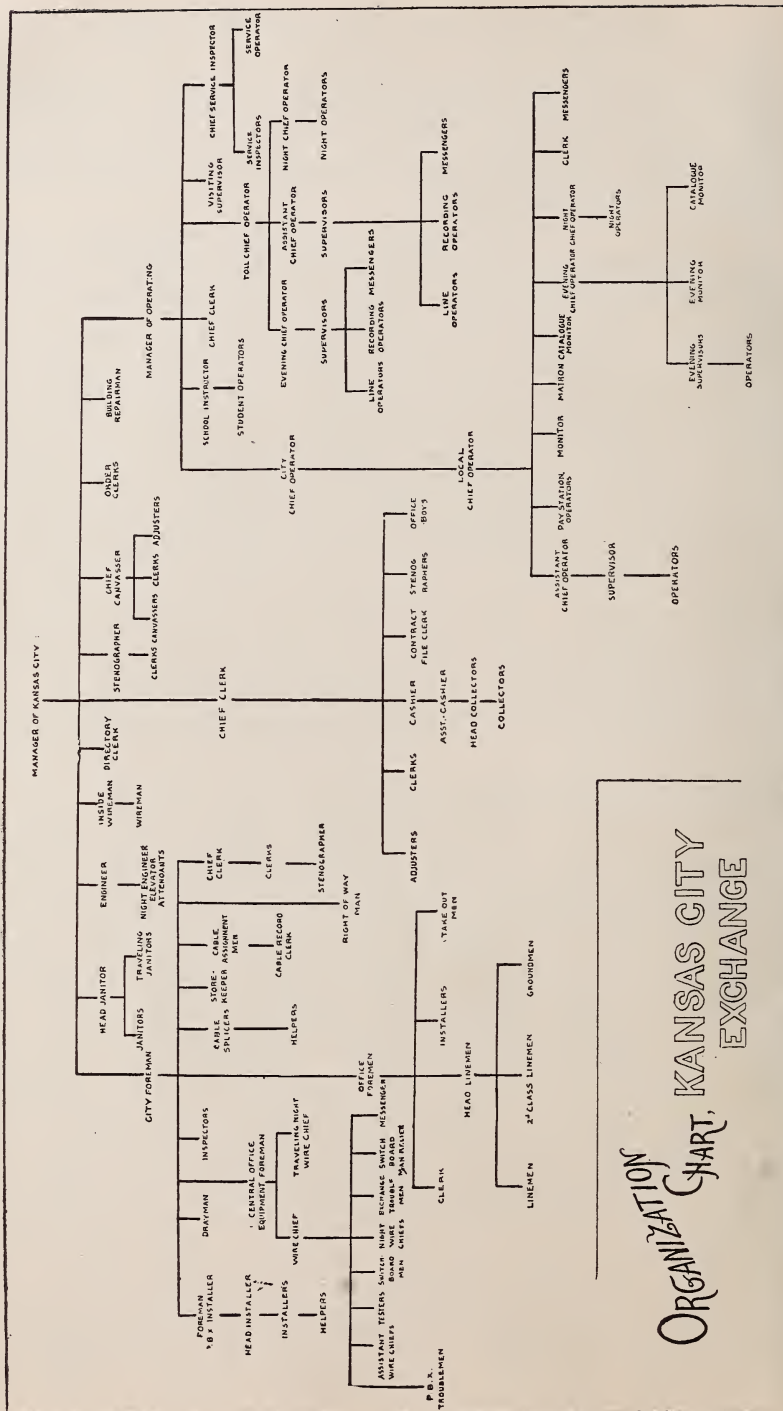
ORGANIZATION OF THE LABOR FORCE.

While industrial as well as sociological interest in the telephone business centers in the work of the women it employs, and while the quality of the service the companies are able to furnish the public depends largely upon them, some knowledge of the industrial organization as a whole is important.

Although the telephone business is one of the newest of our large commercial industries, dating from 1876, it has developed a scheme of administrative organization the perfection of which is to be found in few of the older industries. Similar in general plan, the various companies or cities have somewhat varied schemes of organization. The same central idea pervades them all—that is, every man in the organization shall have one definite person and source from which alone he receives his instructions. Each company has an organization chart which is conspicuous in the exchanges of the company. Each group of occupations is classified and placed under a foreman or supervisor who is responsible to one designated as chief supervisor, who in turn is responsible to the manager, and so on up to the president of the company. These organization charts are in the possession of or are accessible to each employee, so that he may know exactly from whom his orders must come and to whom he must report. This system of organization is clearly shown in the chart furnished by the Missouri and Kansas Telephone Company, Kansas City, Mo., which is printed on the next page.

By this chart it is shown that all of the employees of the company are under the general supervision of the manager. The manager of operating, city foremen, chief clerk, building-repair men, order clerks, chief canvasser, stenographer, directory clerk, inside wire man, engineer, and head janitor are responsible directly to the manager. Each of these has direct supervision over such employees as are necessary to conduct the various branches of the business. Many of these departments are again subdivided into divisions, each of which is in charge of an official of the organization. As stated above, each employee has but one direct boss; thus it will be seen that a collector, for instance, shown at the lowest point of the central portion of the chart, is responsible to the head collector, he in turn to the assistant cashier, and so on through the positions of cashier, chief clerk, and manager, each employee being responsible to the one immediately above him.

While in the discussion of wages and hours of labor all the employees and occupations in the industry will be duly considered, it has been thought advisable to deal in this report especially with the work of women, particularly of switchboard operators. With this



purpose in view a somewhat comprehensive study of women's work in the telephone exchange was made, beginning with the application and entrance examination.

APPLICATION AND ENTRANCE EXAMINATION.

The applicant for a position as a telephone operator generally fills out the usual application blanks, in which she states her age, school grade last attended, condition of health, whether or not she lives at home with her parents, place of last employment, reasons for leaving the same, etc. She must also file at least two letters of recommendation from business men not her relatives.

Generally speaking, applicants must submit to a physical examination before being admitted to the training school. In some places this examination is very rigid. In Chicago, for instance, when an applicant for a position as operator has satisfactorily passed the general test she is sent to the medical matron, who is a graduate trained nurse with special training in making physical examinations. This matron has a special room where examinations are made. Applicants remove all clothing and a test is made to ascertain whether there is any trouble with the heart, lungs, nervous system, straightness of the spine, etc., the most approved medical instruments being used for this purpose. Eyes are examined not only for sight, but for infectious diseases. Hearing is tested and the throat is carefully examined, adenoids or aggravated catarrhal conditions being bars to admission. Skin diseases and any infectious trouble likewise bar the applicant. Girls under five feet in height are not accepted because of their inability to reach to the top of the switchboard or a sufficient distance sideways from their position, as will be discussed later on.

Even in cities where the physical examinations are not popular, an examination is made sometimes without the applicant's knowledge. For instance, in one city where the girls interviewed stated that no physical examination or test had been made in their cases, it was ascertained that the applicants are interviewed by a young woman whose exact height is known and who, in talking with the applicant, can, by comparing the level of the eyes with her own, tell within a fraction of an inch the height of the girl with whom she is talking. Experts in other lines interviewed the applicants and ascertained their physical condition. In most places, however, a set physical examination is required. It may be interesting to note the relation between the total number of applications received and the number not accepted, together with the various reasons for rejection, as shown in the following statement from one of the largest cities. The total number of applicants was 6,152. Of this num-

ber, 2,229 were not accepted, for reasons as shown in the following statement:

Too small.....	544
Too old.....	53
Too young.....	436
Physical defects.....	43
Jewish—refused to work holidays.....	11
Colored.....	7
Accent.....	90
Refused vaccination.....	6
Education.....	519
Hearing.....	1
Sight.....	151
Voice.....	82
Appearance.....	169
Refused night work.....	7
Not willing to wait.....	36
Miscellaneous.....	74
Total.....	2,229

Out of 2,557 examinations by the medical matron 232 were rejected for the following reasons:

Weak heart.....	41
Tuberculosis.....	18
Pediculosis.....	6
Untidiness.....	8
Goiter.....	12
Miscellaneous.....	147
Total.....	232

The educational requirements for the above city are usually that the applicant shall have passed through the seventh grade of the city grammar school, but to this rule exceptions are sometimes made.

As will be seen from the foregoing, for the protection of the applicant, as well as for the efficiency of its own service, it is the policy of the company to exclude all women suffering from any form of eye, ear, throat, or heart trouble. Inasmuch as they habitually do the largest part of their reaching and hard work with the right arm and hand, the woman with spinal curvature (be it ever so slight) should be kept out of telephone work. Constant reaching to one side seems to increase spinal curvature. For the nervous woman, too, the work is unsuitable, since the very nature of the work demands self-control and the ability to respond to sudden periods of rush work.

The employment of a woman in any stage of tuberculosis endanger the health of the entire office force. When asked about accepting women in this condition, one manager said: "We never take them if we know it, and seldom have any cases, so far as I know. But you can not always tell. Of course, when they begin to cough, we can't keep them here." In another city one of the night chief operators

complained that she had had a consumptive on the night force and had called the manager's attention to the fact several times. He at last changed the operator to the evening force, thus making it easier for the girl, but leaving the possibilities of contagion quite as great. This operator had coughing spells at times and gradually grew too ill to work. She did not resign until shortly before her death. The telephone company had permitted her to remain until she chose to leave.^(a)

The following table shows for the various cities the age requirements on entering service, and also the educational requirements. It must be noted, however, that except where the law of the State interferes, the lowest age which the company reports is the minimum age really desired, not always the minimum age which it will sometimes accept. In other words, a company might prefer a 17-year-old girl, and in advertising for help will so state, but that does not mean that an applicant, who from her appearance promised to develop into a good operator, would not be accepted though she was

^a As bearing significantly upon the type of girls and women desired as telephone operators, and indicative of the care taken in selecting them, and incidentally of the appreciation of managers of the trying nature of the work, the following "suggestions as to the selection of telephone operators" furnished by one company to its employing superintendent are of interest:

I. Inquiries into family history:

1. Tuberculosis in parents.
2. Insanity or nervous diseases in parents, hysteria, etc.
3. Children of parents dying young from chronic disease of any nature are usually debilitated and are unable to withstand the strain of an exhausting occupation.

II. Inquiry into personal history:

1. History of chorea or St. Vitus's dance.
2. History of hysteria.
3. History of any nervous disease.
4. History of epilepsy (fits).

III. Objective signs of tuberculosis:

1. Extreme brilliancy of eye.
2. Hectic flush in cheeks during afternoon and evenings.
3. Poor development of chest and round shoulders.
4. Nervous temperament.
5. Short hacking cough.
6. Those predisposed to tuberculosis usually have a heavy growth of hair on head.

IV. Objective signs of chorea or St. Vitus's dance:

1. Twitching of eyelids, fingers, and muscles.
2. Inability to sit still.
3. Disordered motion of different parts of body.
4. Restlessness and awkwardness of movements.
5. Deficient mental power.

V. Objective signs of hysteria:

1. Manifestations usually develop abruptly; are generally paroxysmal; appear without obvious cause; and often subside spontaneously under some emotional excitement.
2. Easily moved to laughter and tears.

An individual who possesses none of the above signs and symptoms, who is perfect physically, that is, not crippled, and who has (1) a calm, clear eye and steady gaze, (2) steady hand and firm set jaws, (3) weight proportional to height, (4) good appetite, (5) healthy, rosy complexion, and (6) not easily excited, can usually withstand the wear and tear of an exhausting work, such as telephone or telegraph operating, successfully.

one or, in some cases, even two years below the preferred or regulation age. The same may be said of educational requirements. Some companies require simply ability to read and write, some have no set requirements at all, while others require graduation from the elementary or grammar schools of the city. In Boston, for instance, high-school graduates, or girls who have had at least two years of high-school work, are much preferred, but this does not mean that a girl who otherwise is capable would be rejected because she had not attended high school. These regulations reflect the companies' preferences rather than rigid determinations. The table follows:

AGE AND EDUCATIONAL REQUIREMENTS ON ENTERING THE SERVICE OF VARIOUS TELEPHONE COMPANIES, AND RATES OF WAGES PAID OPERATORS WHILE IN TRAINING.

Company.	Age requirements on entering service (years).	Educational requirements on entering service.	Are operators paid wages while in training?	Rate of wages paid while in training.
Bell Telephone Co. of Missouri, St. Louis, Mo.	17	Grammar school..	Yes.....	\$20.00 mo.
Bell Telephone Co. of Pennsylvania, Philadelphia, Pa.	16	Grammar school..	Yes.....	.81 da.
Central District and Printing Telegraph Co., Pittsburgh, Pa.	16	Common school...	Yes (a)....	.50 da.
Central Union Telephone Co., Indianapolis, Ind.	16	Eighth grade.....	Yes.....	17.00 mo.
Chesapeake and Potomac Telephone Co., Baltimore, Md.	16	Seventh grade.....	Yes.....	3.00 wk.
Chesapeake and Potomac Telephone Co., Washington, D. C.	18	Grammar school..	Yes.....	3.00 wk.
Chicago Telephone Co., Chicago, Ill.	17	Seventh grade.....	Yes.....	4.50 wk.
Cincinnati and Suburban Bell Telephone Co., Cincinnati, Ohio.	18	Common school...	Yes.....	2.00 wk.
Citizens Telephone Co., Covington, Ky.	18	Common school...	Yes.....	2.00 wk.
Cleveland Telephone Co., Cleveland, Ohio.	18	Sixth grade.....	Yes.....	15.00 mo.
Colorado Telephone Co., Denver, Colo.	16	Eighth grade.....	Yes (b)....	20.00 mo.
Cumberland Telephone and Telegraph Co., Louisville, Ky.	17	(c)	Yes.....	.25 da.
Cumberland Telephone and Telegraph Co., Nashville, Tenn.	17	(c)	Yes (d)....	.25 da.
Cumberland Telephone and Telegraph Co., New Orleans, La.	17	(c)	Yes.....	.25 da.
Missouri and Kansas Telephone Co.	16	(e)	Yes.....	15.00 mo.
Nebraska Telephone Co., Omaha, Nebr.	16	Common school...	Yes.....	(f)
New England Telephone and Telegraph Co., Boston, Mass.	17	Grammar school..	Yes.....	4.00 wk.
New York Telephone Co., New York, N. Y.	16	Common school...	Yes.....	5.00 wk.
Northwestern Telephone Exchange Co.	16	Common school...	Yes.....	.40 da.
Ozark Bell Telephone Co.	16	(e)	No.....	-----
Pacific Telephone and Telegraph Co.	16	Common school...	Yes.....	20.00 mo.
Rocky Mountain Bell Telephone Co., Salt Lake City, Utah.	17	Grade school (g)...	Yes.....	.11 hr.
Southern Bell Telephone and Telegraph Co.	16	Grammar school..	Yes.....	(h)15.00 mo.
Southwestern Telegraph and Telephone Co., Dallas, Tex.	18	Common school...	Yes.....	10.00 mo.

a If they qualify.

e Ability to read and write.

b After the first week.

f \$15 to \$18 per month.

h In one exchange, \$17.50 per month.

c No requirement.

g Graduation required.

d For two weeks.

TRAINING SCHOOLS.

Having passed successfully the preliminary examinations and physical tests, the successful applicants are usually placed in training schools where they are given from three to four weeks intensive training in the work upon which they are about to begin. Telephone companies fully realize that this special equipment (almost, if not quite, equivalent to that of apprenticeship in other trades) is neces-



9-26-08

LECTURE ROOM—TELEPHONE TRAINING SCHOOL, CHICAGO, ILL.



OPERATING PRACTICE ROOM, "A" BOARD—TELEPHONE TRAINING SCHOOL, CHICAGO, ILL.



MULTIPLE BOARD PRACTICE ROOM—TELEPHONE TRAINING SCHOOL, CHICAGO, ILL.

sary to make good switchboard operators. As the ordinary apprenticeship conditions are impracticable in the industry, most companies have established training schools for operators in which applicants without experience are instructed in the general mechanism of switchboards and trained in the specific work of the ordinary operator.

These schools have, in addition to the lecture room used for general instruction, rooms equipped both with ordinary operating boards and with multiple practice boards.

The lessons, from ten to twenty in number, require usually a three-weeks' school course. In Appendix B, pp. 333 to 340, will be found the lessons as given in the school of one of the large companies, which indicate that the requirements of the business are very considerable. A girl must learn the meaning of a large number of color-light signals, and what to do in each case. In addition, she must learn numerous phrases to be used in answering user's calls or in conversation with them, as stereotyped phrases only can be used. In the larger cities she must know all of the divisions of the city system, the exchanges and the grouping of exchanges into divisions, the numerous "neighborhood" or suburban exchanges, and the "routing" of calls for these through the appropriate city exchange. Even where routing charts are posted in front of each "position," competent operators are expected to know how to route most of these calls without special reference to her chart.

She must recognize instantly and know how to handle a great variety of different kinds of calls distinguishable to her by the different colored lights which they flash on the board in front of her, as measured-meter rate calls, toll calls, nickel-machine calls, etc. All this she learns in the training school, theoretically from the lectures in the lecture room, and practically from its application in the school practice rooms.

The accompanying photographic reproductions, if taken in connection with the text of the lessons reproduced in Appendix B, give a very adequate conception of these schools and the necessity for them in the training of telephone operators.

Special vocal training is also given to the end that pupils who successfully pass through the schools shall have as perfect, plain, and distinct enunciation of words as possible. Pronunciation and vocal inflection is taught with a view to best results over a telephone.

Companies not having training schools give girls such training on the general switchboards as is necessary, under the tutelage of a supervisor or experienced operator. As indicated above, the school course usually requires three weeks. Most companies pay for the time thus occupied; in fact, only one company reporting does not pay applicants while in training. One company pays only such applicants as qualify for operators, one pays after the first week, and one pays for two weeks of training. All others pay for the entire

training period at rates ranging from 25 cents per day, paid by one company, up to the full entrance rate of pay.

The educational requirements differ somewhat with various companies and in various parts of the country, as shown by the foregoing table, page 22. No company requires more than that the applicant shall be graduated from the common school of grammar or elementary grades, while a few require only an ability to read and write. No company reporting has an age limit lower than 16 years for applicants for positions. Nevertheless, a number of operators were found younger than this, and it was generally found, as stated above, that while the companies had a standard or rule, these were expressions of a preference rather than an absolute requirement. That is to say, a company preferring girls above 16 would not, in case of shortage of help, ignore the application of a younger girl when the state law was not thereby violated.

After completing the school course the applicants are subjected to a somewhat severe examination in the subject-matter covered during the school period, and if this is passed successfully they are assigned to work at an exchange. The percentage failing to pass on examination has in many localities been quite large. The first few months' actual experience at the switchboard is generally in a "position" between two more experienced operators, and close supervision of beginners is the rule everywhere until the supervisor and monitor are willing to certify that the student operator is thoroughly competent. Each operator has a book of operating rules and regulations with which she must be minutely familiar. In a city like Chicago these regulations fill a book of 85 pages, while in Washington or Baltimore a book of half the size and having 46 pages contains the "Rules for the government and regulation of central office employees."

Improvements in the schools and school methods have reduced somewhat the percentage of failures to pass on final examinations, which is still as high as 40 per cent in some localities, rarely falling below 25 per cent. This thorough weeding out of applicants, first by the application bureau, secondly by the physical and medical tests, and thirdly by the final examinations upon the close of the school training, insures that a very excellent class of young women are finally accepted for the companies, and would, if the tenure of service could by any method be increased, give the public a splendid guarantee of efficient service.

WORKING SHIFTS OR TRICKS AND HOURS OF LABOR FOR OPERATORS.

In nearly all telephone offices the operating force is divided into four general shifts or "tricks," viz, day, evening, night, and split-trick shifts. It is the universal policy to have employees on any

shift (except perhaps the all-night operators) come in a few at a time, so that the change of force at the switchboard will be made gradually and without interruption to service. In Dallas, Tex., for instance, on a schedule covering the five city exchanges, there are 22 different arrangements of day hours for a force of 104 operators; 19 arrangements for 31 evening operators; 82 arrangements for 70 split-trick operators, and two arrangements for 17 night operators.

Although no definite hours can be scheduled as typical of any shift, the following definitions have been assumed for purposes of this investigation:

Day operator.—An operator whose working hours are between 6 a. m. and 7.30 p. m., and who has no interval of more than two hours' duration between periods of work.

Evening operator.—An operator whose work begins no earlier than 11 a. m.^(a) and ends no earlier than 8 p. m., having no single interval of more than two hours' duration between periods of work.

Split-trick operator.—An operator whose work is divided into two or more distinct periods by an interval of more than two hours' duration between two of these periods.

Night operator.—An operator whose period of work extends beyond midnight.

New operators, fresh from the training school, are usually put on the split-trick, which for this reason has a large proportion of younger girls. The age distribution of operators by tricks is illustrated by the following tables showing this distribution for Kansas City, Mo. (Bell and independent companies); New York City (metropolitan district); New York City (outside districts); Dallas, Tex.; Atlanta, Ga., and New Orleans, La.:

AGE DISTRIBUTION OF OPERATORS IN SPECIFIED CITIES, BY SHIFTS.
KANSAS CITY, MO.: BELL COMPANY.

Shift.	Operators of each specified age.							Total.
	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years and over.	
Day.....		4	4	19	14	11	93	145
Evening.....	1	18	13	20	6	4	32	94
Split-trick.....		23	15	12	10	4	22	86
Night.....	2	2	3	3	5	3	25	43
Total.....	3	47	35	54	35	22	172	368

^a With only one exception, operators do not go home after 11 p. m., usually not after 10 p. m., their hours being so arranged so as to allow them to remain in the exchange during the night.

AGE DISTRIBUTION OF OPERATORS IN SPECIFIED CITIES, BY SHIFTS—Continued.

KANSAS CITY, MO.: HOME COMPANY.

Shift.	Operators of each specified age.							Total.
	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years and over.	
Day.....	2	8	25	44	44	30	96	249
Evening.....		4	10	12	6	5	21	58
Split-trick.....	1	27	15	32	18	5	31	129
Night.....		3	5	8	4	3	5	28
Total.....	3	42	55	96	72	43	153	464

NEW YORK CITY: NEW YORK TELEPHONE CO. (metropolitan district).

Day.....		19	245	395	304	243	634	1,840
Evening.....		20	136	140	93	57	57	503
Split-trick.....		2	53	115	79	39	31	319
Night.....		4	48	113	116	74	105	460
Total.....		45	482	763	592	413	827	3,122

NEW YORK CITY: NEW YORK TELEPHONE CO. (20 exchanges outside the metropolitan district).^(a)

Day.....		2	13	18	20	11	71	135
Evening.....		1	7	9	4	8	7	36
Split-trick.....	1	4	10	11	12	10	14	62
Night.....		5	10	13	8	8	12	56
Total.....	1	12	40	51	44	37	104	289

NEW YORK CITY: AMERICAN TELEPHONE AND TELEGRAPH CO. (long distance).

Day.....			1	6	16	20	107	150
Evening.....				2	8	4	23	37
Split-trick.....					8	2	20	30
Night.....				1	1	5	4	11
Total.....			1	9	33	31	154	228

DALLAS, TEX.: SOUTHWESTERN TELEGRAPH AND TELEPHONE CO. (4 exchanges, including toll office).

Day.....	5	7	12	17	16	14	33	104
Evening.....	^e 2		^f 6	2	^f 1	3	17	31
Split-trick.....	^g 2	7	10	7	11	5	28	70
Night (^h).....		3	3	2	2	1	6	17
Extra (ⁱ).....							1	1
Total.....	^j 9	17	31	28	30	23	85	223

^a Figures relate to 292 operators reporting as to shifts out of a total of 303 operators, distributed by exchanges as follows: In New York—Briarcliff, 4; Dobbs Ferry, 8; Irvington, 5; Larchmont, 9; Mamaroneck, 8; Mount Vernon, 38; New Rochelle, 36; Nyack, 13; Ossining, 15; Port Chester, 16; Piedmont, 16; Pleasantville, 7; Rye, 9; Spring Valley, 4; Suffern, 6; Tarrytown, 12; Tuckahoe, 8; White Plains, 30; Yonkers, 41; and in Connecticut, Greenwich, 18.

^b Not including 1 male operator.

^c Not including 2 male operators.

^d Not including 3 male operators.

^e Including 1 toll messenger 13 years of age, who works from 1 to 10 p. m.

^f Including 1 who works until 11 p. m.

^g Including 1 operator 14 years of age.

^h Night hours 6 p. m. to 7 a. m. at main and toll with three hours' sleep, and 9 p. m. to 7 a. m. at Cliff and Haskell with no sleep.

ⁱ No special hours; works when needed

^j Including 1 toll messenger 13 years of age and 1 operator 14 years of age.

AGE DISTRIBUTION OF OPERATORS IN SPECIFIED CITIES, BY SHIFTS—Concluded.

ATLANTA, GA.: SOUTHERN BELL TELEPHONE AND TELEGRAPH CO. (3 metropolitan and 2 suburban districts).

Shift.	Operators of each specified age.							Total.
	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years and over.	
Day.....	1	13	5	12	9	8	45	93
Evening.....	1	2	2	3	3	1	4	16
Split-trick.....	2	4	4	3	3	1	8	25
Night.....	1	4	1	5	.....	1	7	19
Total.....	5	23	12	23	15	11	64	153

NEW ORLEANS, LA.: CUMBERLAND TELEPHONE CO.

Day.....	a 17	24	19	10	17	15	45	147
Evening.....	.....	.....	.....	6	10	7	13	36
Split-trick.....	.....	.....	.....	6	5	4	16	31
Night.....	.....	.....	.....	1	2	2	16	21
Total.....	a 17	24	19	23	34	28	90	235

a Including 2 operators 14 years of age.

That the matter of age is largely influenced by state legislation is most strikingly illustrated by the Louisiana companies. Until the summer of 1908 there was no special legislation restricting hours of labor, but in that year the child-labor law was passed, limiting the hours of labor of women under 18 years of age to periods of 10 hours per day or 60 hours per week, the hours to be between 6 a. m. and 7 p. m. At the time of the passage of this law there was a large proportion of operators under the age of 18, and while these have been retained in the service and given hours conforming to the law, the company has ceased almost entirely the employment of women under 18 years of age, and according to the testimony of the chief operator finds that women of 18 and over can be trained to do the work most efficiently. In the Cumberland Telephone Company at New Orleans 25.5 per cent of all operators are under 18 years of age, but these are all on day work. As split-trick work can not be adjusted to a day of ten hours, falling between 6 a. m. and 7 p. m., the younger girls can not be put upon split-trick work.

In Atlanta, Ga., where there is no legislative restriction, 26.1 per cent are under 18 years of age, and of these 12.5 per cent are doing evening work, 25 per cent are on split time, and 15 per cent do night work. The apparent exception to the rule that the new and younger operators go on the split trick is New Orleans, but here the effect of state legislation is clearly shown in the table.

PERCENTAGE OF OPERATORS ON THE VARIOUS SHIFTS OR TRICKS, IN SPECIFIED CITIES.

City.	Per cent of operators on specified shift.			
	Day.	Evening.	Split-trick.	Night.
Kansas City (Bell).....	39.4	25.5	23.4	11.7
Kansas City (Independent).....	53.7	12.5	27.8	6.0
New Orleans, La.....	62.6	15.3	13.2	8.9
Atlanta, Ga.....	60.8	10.5	16.3	12.4
Dallas, Tex.....	46.7	13.9	31.4	^a 7.6
New York City, American Telephone and Telegraph, long distance.....	65.8	16.2	13.2	4.8
New York City, metropolitan district.....	58.9	16.1	10.2	14.8
New York City, exchanges outside metropolitan district.....	46.7	12.5	21.4	19.4

^a Not including 0.4 per cent, classified as "extras."

WORKING HOURS AND HOURS OF LABOR.

The double caption of this section suggests the complexity of the problem of hours in the telephone business. As heretofore intimated, the operators composing the different shifts or forces do not come on or leave work all at once, but come on in squads or relays as required by the exigencies of the business.

As will be shown in more detail elsewhere, the traffic of the telephone office—that is, the number of calls received or handled (technically called "the load")—increases during the morning hours, slowly at first, rapidly from 10 a. m. to 11 or 11.15 a. m. (in business districts), at which time it usually reaches its highest point (called "the morning peak of the load"). It then falls until 2 p. m., when it generally starts upward again, reaching the highest afternoon point ("peak of the afternoon load") from 4.30 to 5 p. m. usually. This, however, is not so high as the highest point in the morning. Those switchboard employees who comprise the "day-operating force" do not, therefore, all come to their work at one hour, work a given time and take their lunch, and then return and work till quitting time, as in most other industries; but they come in squads at different hours, get their "relief" periods at different times, have different times for lunch, and get off at different hours. For this reason, while the hours of labor might be the same for all, and probably would be for all day operators in a given exchange or in a given city, the working hours would be very different for the different employees on that shift. The same would be true of all shifts. Thus, while all day operators in a given exchange would have a net working time, exclusive of lunch and relief periods, of 7½ hours, for instance, and this would constitute their hours of labor, yet their working hours would not be uniform at all. For local reasons, some cities break up the working hours very much more than do others. New York hours, for instance, are less complicated than those of Dallas, Tex., or

ATLANTA, GA.: SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY.

[illegible]

^a Toll operators only. Hours supposed to be 8½ at main exchange and 9 at other exchanges, with ½-hour reliefs, making net, with relief, 8 and 8½ hours.

The evening shift is usually a combination of afternoon and evening work, with hours corresponding in length to those of the day shift. A few companies give $4\frac{1}{2}$ to 5 hours evening shift. One manager said that when a woman gives up her evening to work and thus deprives herself of all social amusements, she deserves special compensation in shorter hours or better wages. In one company where a five-hour evening schedule is in force, a number of the operators are high-school students, who are permitted to remain on evening work until they have finished their school work.

Split-trick operators are usually given hours to cover either the busiest hours both morning and afternoon or to substitute for the day and evening force during relief and lunch periods. Their total actual hours of work may be only 7 or 8, no longer than those of day operators, but the extreme limits of their working hours may cover a period of from 10 to 14 hours. This deprives them of all opportunity to devote either the day or evening to their own uses.

All-night operators usually work from 9 p. m. to 7 a. m. with varying periods for relief and lunch, some companies granting several hours for sleep. There is little work at night and, except where large commission houses (whose work begins about 4 a. m.) are subscribers in the exchange, there are few calls for the night operator to answer. However, such calls as are handled are largely emergency calls (fire, police, doctor, etc.), and need prompt attention, and in case of any accident or disaster the telephone office is first to be affected. It is, therefore, necessary to keep a sufficient force of operators in the exchange to be prepared for emergency, for it would be practically impossible to get extra operators during the night. In most offices the night force is used to sort all the tickets for measured service and toll calls received during the previous day and to test all the circuit wires in the exchange.

Regular lunch periods are granted to all operators, except those on split-trick service, the hours of these being so arranged that they do not need this time.

Half an hour is usually allowed at lunch time, though in some places an hour is allowed. Practically all companies grant relief periods of 15 minutes, both in the forenoon and in the afternoon, thus breaking the strain of the work. There are a few cities in which these relief periods do not obtain. During a period of extreme rush there are a few cases when the lunch period has been curtailed or reduced, but nowhere can it be said that a regular practice is made of doing so. Curtailment of relief periods is more common, and in some places the relief period is regarded by the managers as a privilege rather than as a right; hence only the girls who ask for it are given relief, and only when they ask for it. Where this system obtains, girls feel a reluctance to ask for relief; some-

times they feel that to do so is to jeopardize promotions, and the new operators who need it most are usually the very ones who fail to get it, because a feeling of strangeness or timidity keeps them from asking for favors. Generally speaking, however, the relief periods are considered a right to which all operators are entitled, and while all may be deprived of it occasionally, few or none are usually so deprived.

Split-trick work, upon which the new girl generally enters, is the most objectionable of the working shifts. Some companies have abolished it entirely, though most of them have not yet seen their way to do so. In New York City a practice has grown up of paying the split-trick girl, who lives 10 blocks or more from the exchange in which she works, 60 cents a week as car fare, so that she may go home during the interval or "split" in her working hours. This obviates the worst feature of the split-trick, which is the tendency of the younger girls to loaf around on the streets for the long period that elapses between the first and second parts of their day's work.

Night-trick girls have been the special care of companies in most places, and on the whole it must be said that excellent care is taken for their safety, and generally for their comfort.

Overtime work is frequent and is commonly paid for in time rather than in money, i. e., a girl who is required to work two hours overtime in an emergency is given two hours off at such time as she may designate. Most girls prefer this time payment to a cash or money payment for overtime work.

The practice of requiring overtime is attended by hardships. In the first place it means the lengthening by one or even two hours of a workday that in itself is not short.

The hours of work, as well as the character of the work itself, must be considered in any discussion of nervous and physical strain growing out of an occupation. It was shown that relief periods were sometimes curtailed, that Sunday work was required twice a month in many companies, that holidays were difficult to obtain, that hours were not short, 57 to 61 hours of actual work in a week being not uncommon. A woman who had two years of constant association with telephone operators as telephone library supervisor, with the further duty of assisting them in all matters pertaining to education, health, and comfort, makes the following observation:

Operators were in many instances anxious to join educational or gymnasium classes at night, but seldom remained through a term. The usual reason given was that when night came they were too tired for anything except the lightest forms of amusement. Half a dozen operators joined an evening dressmaking class which met three nights a week. They were all anxious to learn to sew in order to be able to lessen the cost of their clothing. Of the half dozen operators, only

two remained throughout the first term and none returned the second term. The first half hour of work was well done, but before an hour was over there were lines of weariness on all faces, and the strain of the second hour was apparent in the little work accomplished as well as in the evidences of physical exhaustion.

It is practically impossible for an operator to work all day and have sufficient strength left for serious work or study in the evening. This is the universal testimony of the operators. The telephone operator is at a disadvantage compared with employees in most other industries, in that she is usually deprived of a regular weekly day for recuperation. For most telephone operators a Sunday holiday comes, practically, but once in fourteen days, leaving a long interval between days of rest.

Inconvenient arrangements of hours as well as long hours have their evils. In many instances where operators are boarding, they are unable to conform to meal hours, and the result is that they go to cheap restaurants and eat poor food at irregular hours, with deleterious effect upon digestion, and indirectly upon the nervous organization. In this respect as in others, split-trick hours are usually the hardest on the operator. Of 427 employees interviewed, 53 were boarding.

To the operator, split-trick means a day beginning early in the morning and ending late at night. In smaller cities there is time between tricks to go home and study, sleep, or do as she pleases. In a large city the operators live at distances of over half an hour's journey from the exchange, and the distance and extra car fare force them to spend most of their time in the rest room or in wandering about the streets or shops.

The inconvenience of irregular hours for meals is not confined to split-trick work. Numerous complaints have been made by operators regarding the uncertainty of luncheon relief. They are sometimes kept an hour or more beyond their usual time. In many cases, operators have been obliged to have breakfast at home before 6 o'clock in order to be at work at 7; any considerable delay in getting luncheon is, therefore, likely to result in headache or indigestion. Frequently the lunch period is cut from an hour to a half hour, and the operator is thereby deprived of a part of her time needed for rest. Where half an hour is the rule, arrangements are usually such that the operator can get her luncheon comfortably within that time, but inasmuch as the luncheon period serves as an opportunity for rest as well as for the meal, it is doubtful whether less than an hour should be granted in any instance. The processes of digestion are hindered by immediate return to work that entails such nervous activity. The blood surges to head and arms, and digestion is retarded, with resultant headache and nervousness.

Operators on all-night work complain that they are unable to sleep more than from three to five hours during the day, and that after

some months of this experience they are obliged to return to day duty. On some women night work seems to have no visible effect, but it is doubtful whether any very young woman should be permitted to do night work. She is at an age when physical strain will have effect, not only upon herself but upon future generations. Three to four hours of sleep during the night are valuable, but two periods of sleep, one at night and one during the day, can not be considered as equivalent to one uninterrupted period of seven or eight hours' rest. The effect of the interrupted sleeping periods are even worse than those of interrupted working periods in split-trick work.

That the work and hours of the telephone operator have a bearing on the life of the operator for a period far more extensive than that confined within the exchange was specifically shown by the testimony of physicians before the Royal Commission appointed in 1907 to inquire into a dispute as to wages and hours of labor, between the Bell Telephone Company of Canada and its operators at Toronto. They spoke of the effect of the work, not only upon the woman herself, but upon the generations to come.^(a) In that respect the problem of hours and work in a telephone exchange becomes of public moment, for telephone operating is an industry which to-day is a large employer of women and it is moreover a growing industry, opening employment to an ever increasing number of women.^(b)

Regarding the difference between working hours and hours of labor, the foregoing discussion deals in detail with working hours; it is important now to take up the matter of hours of labor in like detail.

In the accompanying table arranged by selected cities for groups of companies, i. e., the Bell, the Independent, and the American Telephone and Telegraph or long-distance companies, is shown the gross length of day, by various tricks in each city; that is to say, the number of hours that the different groups of operators must be within call for each trick. This may not be uniform for all the operators in that trick as is shown, for instance, in the day opera-

^a Report of the Royal Commission on a Dispute Respecting Hours of Employment between the Bell Telephone Company of Canada (Limited) and Operators at Toronto, Ontario, 1907, pp. 69-75.

^b The problem is perhaps expressed by Frederick L. Hoffman in his article on "Physical and medical aspects of labor and industry" (Annals of the American Academy of Political and Social Science, Vol. XXVII, May, 1906, p. 22), where he says: "It manifestly must be to the advantage of the State, and the employers of labor, that nothing within reason be left undone to raise to the highest possible standard the level of national physique and of health and industrial efficiency. * * * The interests of the nation, of wage-earners as a class, and of society as a whole transcend the narrow and selfish interests of short-sighted employers of labor, who, disregarding the teachings of medical and other sciences, manage industry and permit the existence of conditions contrary to a sound industrial economy and a rational humanitarianism."

tors in Kansas City, where the hours covered by the day trick range from 10 to 5½. Following this column of hours covered the table shows the length of different relief periods, then lunch periods granted to different groups of operators, followed by the final column showing net hours worked. From this it will be seen that no adequate summary can be made in tabular form, and no concise statement can be made of the net actual hours of labor of telephone operators. In a general way it can be said the net hours worked average close to 8½ per day. On the other hand, while the net average hours worked are not usually extreme, the number of hours covered, especially in split-trick work, is sometimes very considerable. The table will, it is believed, convey the information obtained upon this subject more clearly than any discussion of it can do.

Where several different sets of hours are given under one trick or shift in the same city, it may mean either that different groups of the same shift in the same exchange work these hours, or it may mean different hours required by the same company in different exchanges in the same city, and it may mean both. In any case it does mean that these hours obtain in the city named among the telephone operators working on the shift or trick specified for the company indicated. It must be borne in mind that each column in this tabular presentation must be considered by itself. The table follows:

HOURS WORKED BY TELEPHONE EMPLOYEES, AND RELIEF AND LUNCH PERIODS, IN SELECTED COMPANIES.

BELL TELEPHONE SYSTEM.

Company.	City.	Tricks worked.	Different hours covered by trick.	Different relief periods. ^a	Different lunch periods. ^a	Net hours worked per day. ^b
				<i>h. m.</i>	<i>h. m.</i>	
Chesapeake and Potomac Telephone Co.	Washington, D. C....	Day.....	9	30	{ 60 30	8
		Evening .	9	30	{ 60 30	8
		Split.....	12	5 0	-----	7
Chicago Telephone Co.....	Chicago, Ill.....	Night....	10	3 0	{ 30 30	6½
		Day.....	{ 9½ 9	{ 30 15	{ 60 30	8
		Evening .	5	{ 15 10	{ 15	4½ 4¼
		Split.....	{ 14 13 12½	{ 6 0 5 0 4 30	{ 15	{ 8 8 7½
			8	15		
			10	60		8
Cincinnati and Suburban Telephone Co.	Cincinnati, Ohio.....	Night....	{ 9½ 9	{ 30 30	{ 60 30	7½
		Day.....	10	30	60	8½
		Evening .	4	5	-----	3¼
		Split.....	14	7 0	-----	7
Citizens Telephone Co.....	Covington, Ky.....	Night....	10	15	30	9½
		Day.....	10	30	60	8½
		Evening .	4	5	-----	3¼
		Split.....	14	7 0	-----	7
		Night....	10	15	30	9½

^a The figures in this column show the different periods granted to different groups of employees within the trick, either in the same exchange or in different exchanges of the company.

^b The figures in this column show the net hours worked by different groups of employees within the trick, either in the same exchange or in different exchanges of the company.

HOURS WORKED BY TELEPHONE EMPLOYEES, AND RELIEF AND LUNCH PERIODS,
IN SELECTED COMPANIES—Continued.

BELL TELEPHONE SYSTEM—Concluded.

Company.	City.	Tricks worked.	Different hours covered by trick.	Different relief periods. ^a	Different lunch periods. ^a	Net hours worked per day. ^b
Cleveland Telephone Co.....	Cleveland, Ohio.....	Day.....	10	<i>h. m.</i> 30	<i>h. m.</i> 60	8½
		Evening. {	10½	30	1 30	8½
		Split..... {	9½	30	30	8½
		Night..... {	12½	30	3 30	8½
Colorado Telephone Co.....	Denver, Colo.....	Day.....	9	30	30	8
		Evening. {	11	24	3 0	7¾
		Split..... {	10	24	2 0	7¾
		Night..... {	12	24	4 0	7¾
Cumberland Telephone and Telegraph Co.	New Orleans, La.....	Day.....	9½	30	1 0	8
		Split..... {	10	-----	60	9
		Night..... {	9½	2 30	-----	7
		-----	10	-----	60	9
Missouri and Kansas Telephone Co.	Kansas City, Mo.....	Day..... {	12	-----	2 0	12
		-----	10	-----	45	8½
		-----	9	-----	60	8
		-----	5½	-----	-----	5½
		-----	11	-----	-----	-----
		-----	9	-----	3 0	8
		-----	8½	-----	60	6½
		-----	8	-----	30	5½
		-----	6½	-----	-----	-----
		-----	6	-----	-----	-----
		-----	5½	-----	-----	-----
		-----	15	7 0	-----	8
Nebraska Telephone Co.....	Omaha, Nebr.....	Day..... {	12	4 0	-----	7½
		-----	11½	3 0	-----	-----
		-----	11	-----	-----	8
		-----	10	-----	-----	12
		-----	9	-----	-----	10
		Day..... {	9½	30	60	9
		Evening. {	7½	30	30	8
		Split..... {	12	30	5 0	6½
		Night..... {	9	30	60	6½
		Day..... {	10	30	60	7½
		Evening. {	5	15	-----	8½
		Split..... {	6	-----	-----	5½
New England Telephone and Telegraph Co.	Boston, Mass.....	Day..... {	13	30	5 0	4¾
		Split..... {	12	3 0	60	7½
		Night..... {	12	-----	60	8
		Day..... {	9	-----	60	8
		Evening. {	10	-----	60	8
		Split..... {	9	-----	2 0	7
		Split..... {	8	-----	6 30	-----
		-----	14½	-----	5 0	-----
		-----	13	-----	4 30	8
		-----	12½	-----	4 0	6
		-----	12	-----	3 0	-----
		-----	11	-----	2 0	-----
Ozark Bell Telephone Co.....	Springfield, Mo.....	Day..... {	15	-----	-----	15
		-----	11½	-----	-----	11½
		-----	9	-----	60	9
		Day..... {	10	-----	1 30	8½
		Split..... {	13	-----	4 0	9
		Split..... {	11	-----	2 30	8½
		Night..... {	13	15	5 0	8½
		-----	12½	-----	4 0	7½
		Day..... {	10	30	60	8½
		Evening. {	9½	30	60	8
		Split..... {	13	4 30	-----	8½
		Night..... {	13	3 0	30	9½
Southern Bell Telephone and Telegraph Co.	Atlanta, Ga.....	Day..... {	10½	30	1 30	8½
		Evening. {	11	30	4 30	6
		Split..... {	12	30	5 30	6
		Night..... {	13	-----	4 0	9
		Day..... {	10	30	60	8½
		Evening. {	9½	30	60	8
		Split..... {	13	4 30	-----	8½
		Night..... {	13	3 0	30	9½
		Day..... {	10½	30	1 30	8½
		Evening. {	11	30	4 30	6
		Split..... {	12	30	5 30	6
		Night..... {	13	-----	4 0	9
Southwestern Telegraph and Telephone Co.	Dallas, Tex.....	Day..... {	10½	30	1 30	8½
		Evening. {	11	30	4 30	6
		Split..... {	12	30	5 30	6
		Night..... {	13	-----	4 0	9

^a The figures in this column show the different periods granted to different groups of employees within the trick, either in the same exchange or in different exchanges of the company.

^b The figures in this column show the net hours worked by different groups of employees within the trick, either in the same exchange or in different exchanges of the company.

HOURS WORKED BY TELEPHONE EMPLOYEES, AND RELIEF AND LUNCH PERIODS
IN SELECTED COMPANIES—Concluded.

INDEPENDENT TELEPHONE COMPANIES.

Company.	City.	Tricks worked.	Different hours covered by trick.	Different relief periods. ^a	Different lunch periods. ^a	Net hours worked per day. ^b
				<i>h. m.</i>	<i>h. m.</i>	
Louisville Home Telephone Co....	Louisville, Ky.....	Day.....	10	30	60	8½
		Evening.....	5	15	-----	4½
		Split.....	10	3 15	-----	6½
		Night.....	9	30	60	7½
Maryland Telephone Co.....	Baltimore, Md.....	Day.....	9½	15	45	8½
		Evening.....	9½	15	45	8½
		Split.....	12½	15	3 30	8½
		Night.....	9	15	45	8

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

American Telephone and Telegraph Co.	Boston, Mass.....	Day.....	9	-----	60	8
		Evening.....	6	-----	-----	6
		Split.....	{ 12½	-----	{ 6 0	{ 6½
		Night.....	8	-----	-----	8
American Telephone and Telegraph Co.	Chicago, Ill.....	Day.....	9	20	60	7¾
		Evening.....	6	-----	15	5¾
		Split.....	{ 12	-----	{ 6 0	{ 6
		Night.....	{ 11	-----	{ 5 0	{ 6½
American Telephone and Telegraph Co.	Cincinnati, Ohio.....	Day.....	7½	-----	60	6½
		Evening.....	9	-----	60	8
		Split.....	{ 13	-----	{ 5 0	{ 8
		Night.....	{ 12	-----	{ 4 0	{ 8
American Telephone and Telegraph Co.	Kansas City, Mo.....	Day.....	{ 10	-----	{ 60	{ 8
		Evening.....	{ 9½	-----	{ 60	{ 8½
		Split.....	{ 12½	-----	{ 4 0	{ 8½
		Night.....	{ 12	-----	{ 4 0	{ 8
American Telephone and Telegraph Co.	Minneapolis, Minn...	Day.....	9	-----	60	8
		Evening.....	8½	15	60	7¾
		Split.....	12½	-----	5 0	7½
American Telephone and Telegraph Co.	New York, N. Y.....	Day.....	10	15	45	9
		Evening.....	7	-----	30	6½
		Split.....	12½	-----	6 0	6½
		Night.....	9	2 30	30	6
American Telephone and Telegraph Co.	Philadelphia, Pa.....	Day.....	9	-----	60	8
		Evening.....	6	-----	-----	6
		Split.....	{ 11½	-----	{ 4 30	{ 7
		Night.....	8	-----	4 0	7
American Telephone and Telegraph Co.	Pittsburg, Pa.....	Day.....	9	-----	60	8
		Evening.....	7	-----	30	6½
		Split.....	11½	-----	4 30	7
		Night.....	8	-----	30	7½
American Telephone and Telegraph Co.	St. Louis, Mo.....	Day.....	9	-----	30	8½
		Evening.....	3	-----	30	8½
		Split.....	12	-----	3 30	8½
		Night.....	9	-----	30	8½

^a The figures in this column show the different periods granted to different groups of employees within the trick, either in the same exchange or in different exchanges of the company.

^b The figures in this column show the net hours worked by different groups of employees within the trick, either in the same exchange or in different exchanges of the company.

CHARACTER AND SEVERITY OF THE WORK.

Whether or not the work of the telephone operator is severe and exacting depends upon circumstances and conditions. It may be severe at times and comparatively easy at others. The speed rate of the work, the length of time during which high speed rates are kept up without break, the height of the reach above the operator's head, and the length of the side reach, all these go to make up the elements

of hardship that may at times enter into questions of the severity of the work.

To understand these elements fully and hence to grasp the significance of the tables on these subjects which are here included, a more detailed account of the work of the switchboard operations must be given.

In a former section the types of switchboard, the magneto and the common battery, were referred to. Here it is intended to give a description of switchboards from the point of view of the work of the women and girls who answer calls.

DESCRIPTION OF TELEPHONE WORK.

Perhaps as good a description of a telephone exchange and the work done in it as can be obtained is that given in the report of the Royal Commission of Canada, as follows: ^(a)

"On entering the operating room of the exchange, one sees from 80 to 100 young women seated beside each other on high chairs opposite a key-board which extends in the form of a semicircle around the three sides of the room. This board, which lies in a horizontal position, is a little over a foot wide. The position of the operator in regard to it is the same as if she were seated at a table. Joined to this board and rising vertically at right angles to it is another board filled with small holes which represent the points at which wires connect with the exchange. This board extends around the room in the same fashion as the horizontal board, and is marked off into divisions or sections, there being one division to every three operators. Each section of the board is subdivided into panels, the upper half of which are made up of small sections containing holes all of which are numbered, each small section resembling somewhat a honey-comb in appearance. These holes indicate the points at which connections are made with the several wires running out of the exchange. Each operator has before her on the upper half of these panels, on what is known as 'the multiple,' the number of every telephone connecting with the exchange, the lines being looped throughout the entire board through the multiple portion, so that any one operator can reach any one line she is asked for. The lower portion of the vertical board is also subdivided into holes, accompanying which are rows of glass covered orifices, set closely together in parallel rows. Within each orifice, and beneath the glass, is a miniature incandescent lamp, which is extinguished except when serving as a signal. These holes indicate the point at which subscribers' 'phones run into and connect with the exchange. Suppose there were a total of 8,000 telephones running into the

^a Report of the Royal Commission on a Dispute Respecting Hours of Employment between the Bell Telephone Company of Canada, Ltd., and Operators at Toronto, Ontario, 1907, pp. 45-49.

exchange. This number would be distributed over the entire semi-circle board, so that each operator will have before her a certain number of 'phones for which she is directly responsible. On the horizontal board in front of the operator, and removed a short distance from the base of the vertical board, are two rows of small plugs attached to cords, which extend beneath the board, the points of the plugs alone appearing above the surface. Parallel to these plugs and a little nearer to the operator are two rows of glass-covered orifices similar to those on the lower half of the vertical board, and parallel to these again and still closer to the operator is a row of small levers or keys. The operator wears a band around the head, to which is attached a receiver placed immediately over her left ear, and a transmitter or mouth-piece so adjusted that she may conveniently speak into it while it is not in immediate proximity to her lips. Both the receiver and the transmitter are connected by cords with the main board. In virtue of this device the operator is free to use both hands to make the necessary connections.

"When a subscriber rings up central or lifts the 'phone from the hook, a light immediately glows within the glass-covered orifice on the lower half of the vertical board at the point at which the 'phone is connected by wire with the exchange. This light is an indication to the operator that a subscriber is calling central. She thereupon takes with one hand one of the plugs to which a cord is attached and inserts it in the hole or socket (technically termed the 'jack') corresponding to the light which is glowing, at the same time pressing forward one of the levers or keys. This connects her with the calling subscriber, of whom she requests the number desired. On receiving the number she takes the end of the other cord—there are a pair of cords with a plug at the end of each—and inserts its plug in the hole or socket (the 'jack') on the upper half or 'multiple' portion of the board which bears the number requested. She then throws the lever back which connects for a moment the machine generating current, and takes a little portion of that current to ring the bell of the called subscriber. The plugs inserted in this way effect the desired connection between the 'phones. As soon as the operator connects with the subscriber by inserting the plug in the hole at which his 'phone connects with the main exchange, the light beside this hole, which has been her signal, is extinguished, and one of the small lights on the keyboard begins to glow. Its companion light glows also once the connection is made, and until the other 'phone is taken down for purposes of conversation. Once the conversation begins both of the signal lights go out. When the conversation ends, as each subscriber hangs up his 'phone, the companion lights opposite the companion plugs begin again to glow. It is then the duty of the operator to remove the plugs from the holes into which

they have been placed, and thus sever the connection and extinguish the lights. This work of making and severing connections is the main duty of the operators. In other words, an operator is continually answering subscribers, covering the board with such connections as are requested and as rapidly clearing the board whenever conversations are ended; putting up and taking down connections.

“A more complete description of the switchboard and duties of operators will be had from the following extracts taken from an article on ‘The telephone exchange,’ by S. J. Larned, general superintendent of the Chicago Telephone Company, which appears at page 686 and subsequent pages of the July, 1907, number of ‘The World To-day’:

“Supposing a number of lines, all leading in to the central office or exchange, it is necessary to provide there means whereby the user, or subscriber as he is called, may be able to signal whenever he desires service, and may then have his line promptly brought into contact with the line of any other subscriber to the system with whom he wishes to converse. The second subscriber must be signaled by ringing his bell. When the two subscribers have finished their conversation, their wires must be as quickly separated again so that each may be immediately free and available for connection with other subscribers, for these wires or lines may be likened to single-track railway spurs leading into the subscriber’s premises, each of considerable length, but capable of admitting and carrying but one car or message at a time. The most watchful care and systematic handling is necessary in order to permit the handling of a maximum traffic in both directions without collisions and tie-ups.

“There are connected to the Chicago exchange more than 130,000 telephones. (^a) The system must stand ready at any moment to bring together any two of these for conversation. Leaving out of count possible connections with other towns and cities, this means that the machinery must be capable of making on an instant’s notice, any one of nearly seventeen billion possible combinations. The end of the conversation must be accurately noted and the lines promptly disconnected. Before connection is made it must be ascertained that the line asked for is not already carrying another message or temporarily disabled or unavailable for any other reason.

“In establishing connections, all the above conditions and many others must be noted and allowed for, and yet the time consumed in each step of the process of connection must be measured as seconds or even fractions of a second.

“The switchboard designed to meet these requirements is a highly complicated machine both as to extent and flexibility. The subscribers’ line wires are at that point (i. e., the exchange) separated

^a In 1908 the Chicago Telephone Company reported 423,082 telephones.

and their ends arranged in an orderly manner in rows, or strips, on what is called the terminal or main distributing frame. Each wire is numbered in the order of its appearance on this frame, and a careful record kept of the cables it passes through, the route it takes and the subscriber's telephone which it finally reaches.

“At the main frame or distributing board, above mentioned, are terminated, in a manner similar to the line wires, all the wires from the switchboard. Every line wire must be permanently connected to some one of the switchboard wires; but it is sometimes necessary to change their relation for various reasons, such as the shifting of a given telephone from one underground wire to another, because of the moving of a subscriber's office, etc. For this reason, a short length of easily replaced, flexible wire is used to continue the line wire through the distributing frame to the switchboard wire. This connecting link is technically known as a jumper.

“We have now traced the line wire well on its way to the switchboard, but it is again interrupted by a second distributing board, known as the intermediate distributing frame, where it is divided into two branches. One branch is for outward traffic, the calls which the subscriber originates himself, and it runs to what is called the answering jack. The other branch is for inward traffic; that is, calls made for the subscriber by others, and it runs to that part of the switchboard called the multiple, which will be described later.

“The switchboard itself consists of a long, continuous framework, in which are mounted the answering jacks, the multiple and other parts not yet mentioned, and before which frame sit operators, who connect and disconnect line wires, as ordered by the subscribers.

“The answering jack is the point at which contact is made with subscriber's line by an operator, in response to his call. The device with which a connection is established between two lines is called a pair of cords. It consists of a set of flexible wires or conductors, generally of tinsel, incorporated in a braided linen cord. At each end the cord terminates in a metal plug, which, when pushed into an answering jack, makes a contact between the subscriber's line and the tinsel conductor of the cord. When, therefore, the two plugs, or pair of cords, are inserted in the spring jacks of two different lines, those lines are connected together and in a condition for conversation.

“Just over every answering jack in the face of the switchboard is mounted a small electric lamp, known as the line lamp. By a rather complicated arrangement of apparatus, this lamp is lighted whenever the telephone receiver at the corresponding subscriber's station is picked up. Its glowing is the signal to the operator that the subscriber at that station wishes to make a call. Each telephone line has but one answering jack. They are placed in the lower part of

the switchboard, a certain number before each operator, that number depending upon the use of the telephones, as each operator must answer all of the calls made by the subscribers whose answering jacks are placed directly in front of her. Some lines are used so frequently that but five or ten can be placed in a single operator's position, while other lines may be used so infrequently that more than one hundred can be placed in each position.

“‘When any line lamp begins to glow, the operator promptly picks up a plug connected with any pair of cords, and inserts it in the answering jack corresponding to the lighted lamp. The flexible wires leading from the plug to its mate are also connected to a small switch called the ringing and listening key, located in a horizontal shelf between the operator and the vertical face of the switchboard. By moving the handle of this ringing and listening key, the operator is able to bring the wires leading from her own telephone set into contact with the wires leading from the plug, and consequently into contact with the line wire of the subscriber making the call. The operator is then able to converse with the subscriber and ascertain his wishes.

“‘Having received an order to connect his line with any other subscriber's line, the operator inserts the second plug of the pair into a spring jack connected with the called subscriber's line, and by another movement of the handle of the ringing and listening key, brings the line wire of the called subscriber into contact with wires leading from the ringing generator. The latter is a small dynamo, generating alternating and pulsating electrical currents. The movement of the key just mentioned allows the current from this ringing generator to flow out over the called subscriber's line, the effect being to ring the bell associated with his telephone set, and summon him to the telephone.

“‘The connection of the second plug with a spring jack of the called subscriber can not be made with the answering jack of that second subscriber because that answering jack may be in a position a hundred feet away from the position in which the call is made. It is to meet this condition that the already mentioned inward or multiple branch of the subscribers' line is designed. This branch is connected to spring jacks exactly like the answering jacks except that they are arranged to occupy as little space as possible. They are all marked with the call number of the subscribers that they represent, and are arranged in numerical order, and are piled row above row in the vertical face of the board.

“‘It is possible to bring multiple jacks representing about ten thousand lines within the reach of an operator, and such a portion of the switchboard as contains one jack for each line connected with the office is called a section. Not more than three operators can work

at a section of switchboard, and it is necessary to repeat the sections as often as the number of operators employed demands. Each section is a duplicate of every other, each subscriber's line being extended from the multiple jack in one section to the corresponding multiple jack in the next section, and so on throughout the entire length of the switchboard. This multiple feature of a telephone switchboard calls for a tremendous amount of material and labor in its assembly, a single switchboard, that of the Main office, Chicago, for example, containing over two hundred and seventy thousand jacks and over fourteen million feet of wire.'

"These descriptions may be sufficient to indicate that so far as the calling by subscribers is concerned the intensity of the work, the amount accomplished within a given space of time, or, in other words, the speed of operating, will depend first upon the number of lines which an operator has running into her board and for which she is responsible, secondly, on the number of 'phones connecting with the exchange, which, of course, determines the number of possible connections that can be made, and thirdly, the extent to which the different 'phones are used by subscribers.

"The amount of work which an operator performs in the way of answering calls and making connections is described as her 'load.' This load will be increased or diminished, therefore, according as the number of lines connecting with a portion of the switchboard, the number of 'phones in an exchange, or the number of connections asked for during the day are increased or diminished."

In addition to the foregoing description of the work, it should be noted that in practically all cities, and wherever common battery switchboards are in use, a color scheme is used for signal lights, by means of which the operator is enabled to know and keep track of the various kinds of service so as to make out her tickets for such calls as require a record.

The lamp cap is marked to correspond with an accepted code for different classes of service, as, for instance, a plain white signal lamp call means, in most exchanges, a call for simple flat-rate service. In this case there need be no record made of the call. A dot in the center of the lamp cap means a message rate meter service call, for which the connection must be made and a ticket made out charging it up to the meter. A cross on the cap indicates that the calling person is using a prepayment nickel service. A red lamp indicates a public pay station; a green light indicates a P. B. X. line, etc. An operator must, at all times, be familiar with this color signal code.

Changes in number, removals, and discontinuances of 'phones occur daily, and the operator must familiarize herself with these immediately, either through a bulletin published daily or by means of a colored peg system, or both.

UP REACH AND SIDE REACH ON SWITCHBOARD.

The height of the board above the shelf and the width of the sections, or distance of the side reach an operator must make to plug in the farthest jacks in her jurisdiction, constitute the physical elements of strain that go to make up the several conditions of severity of the work.

In determining the height of switchboard for purposes of this report, measurement was made from the base or shelf through which the pairs of cords and plugs run and upon which the plugs rest (which shelf reaches just above the waist line as the operator sits in her chair) to the top row of jacks on the multiple board in front of her, i. e., to the highest point which she must at any time reach. While in the acceptance of applicants, as heretofore stated, some attention is paid to the height of the operator—that is, short girls are not employed—nevertheless common observations show that with a switchboard on which the top row of jacks is more than 30 inches above the shelf, most women will at times have an excessive reach. During numerous visits to exchanges it was noted that with a 35-inch board women with difficulty reached the fifth and sometimes the sixth row from the top, while the top row could not be reached without standing. In one city the brass foot rail was worn through in two places from the necessity of standing on it to reach the top row of jacks. Accidents, while infrequent, do sometimes occur in the rush of calls, by the necessity of hurriedly reaching this top row, as is instanced by an operator in New York City who reached for a jack too high to be reached from her chair, the foot missing the foot rail as she attempted to stand upon it to plug in for the call; as a result she fell, striking her breast against the shelf; a serious tumor developed, as it is alleged, from the bruise she received.

Accepting 30 inches as the maximum height at which a row of jacks can be comfortably reached by an operator, the accompanying table shows that in 121 of the exchanges from which reports were received the height of switchboard above the shelf, or in other words, the greatest upreach of operators was more than 30 inches. In 47 of these the reach was between 38 and 39 inches, while in one case it was between 43 and 44 inches.

The operators interviewed complained much more of the severity of the side reach than they did of the upreach. The extreme upreach is comparatively infrequent, while the side reach is constant. It is the side reach which is most noticed in producing physical exhaustion. "It is the everlasting side-reach that tires us so," is the common expression. However, it may be said that it is not more physically injurious for a woman to become tired at her work than it is for a man to become tired, and that the mere fact of becoming tired means nothing. There seems to be no physiological objec-

tion to a reasonable side reach for women, while there is a decided physiological reason why women should not be required to reach up an excessive distance or too frequently.

The extreme side reach, however, may become a source of undue severity in the work, especially during rush hours. Experiments have shown that 36 inches is about the limit of side reach possible to the ordinary sized woman without too great a strain, especially if such reaches must be made rapidly and kept up for a considerable time.

Accepting 36 inches, therefore, as the maximum of comfortable side reach, 122 exchanges reported a side reach in excess of this; 39 of these report between 36 and 37 inches; 11 between 37 and 38 inches; 10 between 43 and 44 inches; while 1 reports a side reach of between 50 and 51 inches, as shown in the following table:

EXCHANGES IN WHICH HEIGHT OF SWITCHBOARD ABOVE SHELF IS 30 INCHES OR MORE AND EXTREME SIDE REACH IS 36 INCHES OR MORE.

Exchanges in which height of switchboard above shelf is 30 inches or more.		Exchanges in which extreme side reach is 36 inches or more.	
Height of switchboard above shelf (inches).	Number of exchanges.	Extreme side reach (inches).	Number of exchanges.
30 and under 31.....	5	36 and under 37.....	39
31 and under 32.....	10	37 and under 38.....	11
32 and under 33.....	11	38 and under 39.....	8
33 and under 34.....	4	39 and under 40.....	4
34 and under 35.....	2	40 and under 41.....	7
35 and under 36.....	2	41 and under 42.....	8
36 and under 37.....	21	42 and under 43.....	9
37 and under 38.....	16	43 and under 44.....	10
38 and under 39.....	47	44 and under 45.....	6
39 and under 40.....	2	45 and under 46.....	3
43 and under 44.....	1	46 and under 47.....	1
		47 and under 48.....	4
		48 and under 49.....	9
		49 and under 50.....	2
		50 and under 51.....	1

It will thus be seen that telephone operating at the switchboard involves frequent long reaching while sitting in order to place the plugs in the upper jacks on the multiple. Although the switchboard chairs are adjustable and can be raised to a considerable height, the key shelf acts as a limit to an entirely satisfactory adjustment. Especially is this true where the message rate is in use. Operators are then obliged to write tickets and do other clerical work, and this makes it necessary to keep their chairs reasonably low. As a consequence, in order to reach the higher jacks most operators must rise on the foot rail, or at least stretch full arm length. Furthermore, an operator is supposed to cover not only the position directly in front of her, but also to take calls on the entire multiple (three positions) when the operator on whose position these calls arise receives several signals at one time. This means a frequent side reach of 3 feet to each side of the center and an upward reach of 39 inches, making a diagonal stretch

for the operator at times of 53 inches or more from the center of her position.

There have been various methods tried to curtail this stretch. The New York Telephone Company has experimented with a series of platforms of various heights. This makes the reach easier for the supervisor who is standing, or for the operator who rises to answer her calls, but it has little effect on the person who is seated, for the shelf, even when reduced to the width of 6 inches, is still a barrier. The operator whose arm length is not sufficient often has to rise on the foot rail which runs around the base of the switchboard. Some companies make an effort to minimize this strain by putting such lines as have little incoming business (as pay-station telephones from which calls are made, but which are seldom called up) at the top of their multiple boards, so that operators seldom receive calls which necessitate their plugging into these higher jacks. This, however, is not the universal practice.

Many of the companies allow an operator to pass her plug to her neighbor to insert if the reach is too great, but if that neighbor is busy, rather than give a slow connection the operator will strain to complete the connection herself. Moreover, the operator on whose position the call originated is held responsible for any error in connection, and she is therefore naturally loath to pass the call.

In one city there is a practice of placing the cords and plugs at the "hospital position" (the lines out of order) above the multiple jacks instead of on the key shelf. One "hospital" operator said the reach was 32 inches above the shelf, or 10 inches above her head. She says if she has her chair low so that she can write or make out tickets on the key shelf it makes a still greater reach. In exchanges where the new high board of 38 inches has been installed the "hospital" cords are 38 inches above the shelf and 15 inches above the operator's head. The chief operator usually stands on the foot rail and gets the cords down for the "hospital" operator. Normally there is little occasion to reach for these high "hospital" cords, perhaps not over a dozen times on an ordinary day. On a stormy day, however, this position is frequently very busy.

Sometimes an operator has so many calls that in order to move more freely and quickly she will push back her chair and stand at her work. The trouble here lies more in the strain of work than in the standing, which is but a visible symbol of conditions.

An unusual method requiring compulsory standing is practiced by one company, in the exchanges of which chairs are taken away from night operators who show signs of sleepiness and no time for sleeping is allowed.

Constant standing is an inconvenience to which one class of employees, the supervisors, are subject. It is the rule in a number of

cities to permit the supervisor to exchange places at times with a substitute (usually her senior operator), or to allow the supervisor to sit at a desk and act as monitor during part of the day. This custom is, however, far from universal. In one city, at least, supervisors find it difficult to get relief even if they are ill or tired, unless they are so ill as to be obliged to go home and forfeit their wages during the time lost.

The accompanying photographs of a switchboard where the top row of jacks, or upreach of the operator, is too high will present the situation better, perhaps, than figures can do.

LENGTH OF SERVICE OF OPERATORS.

An important element in determining the efficiency of service to the public is the average length of service in the occupation. Broadly speaking, this is an element which the companies can not altogether control, though, so far as the questions of wages, age at beginning work, opportunities for promotion, and sympathetic treatment of employees enter into the problem, the answer lies with the companies. Other elements, however, like that of marriage, are beyond their influence.

According to the general experience of telephone companies, the average service of an operator at the switchboard is about three years. One company, by reducing the age limit at which it would employ girls from 17 to 15 years, increased the average service of its operators from 18 months to 2½ years, and generally speaking, the younger the girls are when they begin the longer they stay at the business. The average length of service of all operators at present employed is reported by Dallas, Tex., as two years and five months; average length of service for all operators is reported as 17 months in Washington, D. C.; and as 18 months in Baltimore, Md.

By operating forces or tricks the figures for Washington and Baltimore are as follows:

AVERAGE MONTHS OF SERVICE OF DAY, EVENING, AND NIGHT OPERATORS IN WASHINGTON, D. C., AND BALTIMORE, MD.

Class of operators.	Average months of service in—	
	Washing- ton.	Baltimore.
Day operators.....	28.6	29.5
Evening operators.....	5.3	8.8
Night operators.....	12.7	11.7

It must be borne in mind in considering the above presentation that numbers of the night and evening operators pass into the day force rather than out of the service, while those dropping out of the day force drop out of the service altogether, comparatively few going into supervisory groups.



11-25-08

"A" SWITCHBOARD WHERE THE REACH IS TOO HIGH—NO. 1.





"A" SWITCHBOARD WHERE THE REACH IS TOO HIGH—NO. 2.

In the matter of promotion in the sense of increased salary, most companies have more or less adhered to automatic systems of granting increases every six months until the maximum is reached. Failure to adhere strictly to this rule, when it is a tacit part of the terms of agreement under which the operator enters the company's employ, was found to be a serious source of complaint and is most fruitful of resignation. Promotions from the ranks of operators to the supervisory force are not infrequent and may be fairly hoped for by the older women in the service. The accompanying table shows for two cities—New York, N. Y., and Atlanta, Ga.—the number in each and in all supervisory positions as compared with the number of switchboard operators, by tricks, and the relative ages of women and girls in the various positions:

PERSONS OF EACH SPECIFIED AGE EMPLOYED ON SUPERVISORY FORCE AND AS SWITCHBOARD OPERATORS, BY SHIFTS.

NEW YORK TELEPHONE CO., NEW YORK, N. Y. (Metropolitan exchanges only).

Occupation.	Employees of each specified age.						Total em- ploy- ees.
	16 years.	17 years.	18 years.	19 years.	20 years.	21 years and over.	
DAY OPERATING FORCE.							
Chief operators and assistant chief operators.....						45	45
Supervisors.....			1	1	10	200	212
Senior operators.....			1	2	15	43	61
Monitors and service observers.....		1		4	6	27	38
Information operators.....		3	7	7	11	63	91
Total supervisory force.....		4	9	14	42	378	447
Total switchboard operators.....	19	245	395	304	243	634	1,840
EVENING FORCE.							
Chief operators and assistant chief operators.....			1		3	14	18
Supervisors.....				4		10	14
Senior operators.....			1	4	6	4	15
Monitors and service observers.....		1	2	2		2	7
Information operators.....			3	5	1	2	11
Total supervisory force.....		1	7	15	10	32	65
Total switchboard operators.....	20	136	140	93	57	57	503
SPLIT-TRICK FORCE.							
Chief operators and assistant chief operators.....						2	2
Supervisors.....			1	4	1	8	14
Senior operators.....			2	3	5	4	14
Monitors and service observers.....			2	2	3		7
Information operators.....			2	2		2	6
Total supervisory force.....			7	11	9	16	43
Total switchboard operators.....	2	53	115	79	39	31	319
NIGHT FORCE.							
Chief operators and assistant chief operators.....			1	1	5	16	23
Supervisors.....			3	8	6	14	31
Senior operators.....							
Monitors and service operators.....				3	2	2	7
Information operators.....			1	4	3	2	10
Total supervisory force.....			5	16	16	34	71
Total switchboard operators.....	4	48	113	116	74	105	460
Total supervisory force, all shifts.....		5	28	56	77	460	626
Total switchboard operators, all shifts.....	45	482	763	592	413	827	3,122

PERSONS OF EACH SPECIFIED AGE EMPLOYED ON SUPERVISORY FORCE AND AS SWITCHBOARD OPERATORS, BY SHIFTS—Concluded.

SOUTHERN BELL TELEPHONE CO., ATLANTA, GA.

Occupation.	Employees of each specified age.							Total em- ploy- ees.
	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years and over.	
DAY OPERATING FORCE.								
Chief operators and assistant chief operators.....						1	4	5
Supervisors.....							7	7
Monitors and service observers.....							1	1
Information operators.....							2	2
Total supervisory force.....						1	14	15
Total switchboard operators.....	1	13	5	12	9	8	45	93
EVENING FORCE.								
Chief operators and assistant chief operators.....							1	1
Supervisors.....							1	1
Monitors and service observers.....							1	1
Information operators.....								
Total supervisory force.....							2	2
Total switchboard operators.....	1	2	2	3	3	1	4	16
SPLIT-TRICK FORCE.								
Chief operators and assistant chief operators.....								
Supervisors.....							4	4
Monitors and service observers.....								
Information operators.....								
Total supervisory force.....							4	4
Total switchboard operators.....	2	4	4	3	3	1	8	25
NIGHT FORCE.								
Chief operators and assistant chief operators.....							2	2
Supervisors.....								
Monitors and service observers.....								
Information operators.....				1				1
Total supervisory force.....				1			2	3
Total switchboard operators.....	1	4	1	5		1	7	19
Total supervisory force, all shifts.....				1		1	22	24
Total switchboard operators, all shifts..	5	23	12	23	15	11	64	153

The use of the telephone is expanding so rapidly that the number of new employees taken on, not to replace others who have resigned or been dismissed but to increase the operating force, renders the consideration of average time of employment or length of service liable to mislead, or at least suggests wrong deductions and conclusions if unaccompanied with proper precautions.

Moreover, efficiency of service is not increased perceptibly after a certain length of experience has been reached. After eight or ten months' service, it is claimed that reasonably bright operator is as efficient as she will ever be at switchboard work.

During 1908 the Railroad Commission of Wisconsin, while considering certain complaints brought by citizens of Milwaukee against

the Wisconsin Telephone Company, took occasion to go into details in the matter of length of service of operators, and in its report submits data of extreme interest and importance. It is shown that in all the territory occupied by the Wisconsin Telephone Company, including Milwaukee, it had January 1, 1906, 242 operators, and that their average length of service was 41.8 months; January 1, 1907, it had 322 operators, with an average length of service of 33.9 months; by July 1, 1907, the number of operators had increased to 427, and the average length of service had decreased to 26.7 months; on December 31, 1907, there were 447 operators, and the average length of service was 23.1 months. On the face of these figures the increase in the force might account for all the decrease in average length of service.^(a)

Considering the seven large exchanges of the company in Milwaukee alone, the commission went more carefully into this subject and found that January 15, 1907, these employed 290 operators, with 22.72 months as the average length of service, and on January 15, 1908, the same exchanges employed 407 operators, with an average length of service of 18.52 months. The details showing classified service by months revealed the following conditions:^(b)

LENGTH OF SERVICE OF OPERATORS IN MILWAUKEE EXCHANGES ON JANUARY 15, 1907, AND ON JANUARY 15, 1908.

Length of service.	Number of operators.		Length of service.	Number of operators.	
	January 15, 1907.	January 15, 1908.		January 15, 1907.	January 15, 1908.
1 month.....	18	3	Over 15 to 16 months.....	5	5
Over 1 to 2 months.....	16	17	Over 16 to 17 months.....	3	10
Over 2 to 3 months.....	28	41	Over 17 to 18 months.....	3	9
Over 3 to 4 months.....	17	49	Over 18 to 21 months.....	12	25
Over 4 to 5 months.....	13	29	Over 21 to 24 months.....	13	11
Over 5 to 6 months.....	19	37	Over 2 to 2½ years.....	15	10
Over 6 to 7 months.....	18	27	Over 2½ to 3 years.....	19	17
Over 7 to 8 months.....	6	15	Over 3 to 4 years.....	17	21
Over 8 to 9 months.....	8	5	Over 4 to 5 years.....	11	11
Over 9 to 10 months.....	6	5	Over 5 to 10 years.....	14	18
Over 10 to 11 months.....	9	5	Over 10 to 15 years.....	6	1
Over 11 to 12 months.....	5	5	Over 15 years.....	3	4
Over 12 to 13 months.....	4	7			
Over 13 to 14 months.....	2	4	Total.....	290	407
Over 14 to 15 months.....		16			

Grouped in more compact form with wider classification, and by the addition of percentage columns for each year, these figures become more illuminative of the subject, as well as more significant.^(c)

^a Lorenz and Lorenz et al. v. Wisconsin Telephone Co., before the Railroad Commission of Wisconsin. Decision and order of the commission, p. 60.

^b Decision and order of the commission, p. 62.

^c Decision and order of the commission, p. 63.

NUMBER AND PER CENT OF OPERATORS IN MILWAUKEE EXCHANGES, BY CLASSIFIED PERIODS OF SERVICE, JANUARY 15, 1907, AND JANUARY 15, 1908.

Length of service.	Operators employed for each specified period.			
	Number.		Per cent.	
	January 15, 1907.	January 15, 1908.	January 15, 1907.	January 15, 1908.
4 months and under.....	79	110	27.24	27.03
Over 4 to 8 months.....	56	108	19.31	26.54
Over 8 to 12 months.....	28	20	9.66	4.91
Over 12 to 16 months.....	11	32	3.79	7.86
Over 16 to 21 months.....	18	44	6.21	10.81
Over 21 months to 2 years.....	13	11	4.48	2.70
Over 2 to 2½ years.....	15	10	5.17	2.46
Over 2½ to 3 years.....	19	17	6.55	4.18
Over 3 to 4 years.....	17	21	5.86	5.16
Over 4 to 5 years.....	11	11	3.79	2.70
Over 5 to 10 years.....	14	18	4.83	4.42
Over 10 to 15 years.....	6	1	2.07	.25
Over 15 years.....	3	4	1.03	.98
Total.....	290	407	100.00	100.00

The commission presents a table showing for 19 months the number of employees leaving each month, which is interesting and important in its bearing on the shifting of employees in the telephone business. It shows that out of 285 employees on the pay rolls January 1, 1907, but 155 remained August 1, 1908, a loss of 130, or 46 per cent in the 19 months.^(a)

MONTHLY RATE OF LEAVING THE SERVICE FOR 285 EMPLOYEES ON THE PAY ROLLS OF THE MILWAUKEE EXCHANGES JANUARY 1, 1907.

[This table relates only to the 285 employees on the pay rolls at the beginning of the period; with this number as a basis, the rates of leaving the service shown in the last column have been computed by this bureau.]

Month.	Employees remaining the first of each month	Employees leaving service during month	Rate of leaving (per cent).
1907.			
January.....	285	16	5.61
February.....	269	9	3.16
March.....	260	10	3.51
April.....	250	10	3.51
May.....	240	12	4.21
June.....	228	12	4.21
July.....	216	10	3.51
August.....	206	8	2.81
September.....	198	8	2.81
October.....	190	5	1.75
November.....	185	4	1.40
December.....	181	5	1.75
1908.			
January.....	176	2	.70
February.....	174	3	1.05
March.....	171	3	1.05
April.....	168	2	.70
May.....	166	4	1.40
June.....	162	2	.70
July.....	160	5	1.75
August.....	155		

Of the employees on the pay roll at the beginning of 1907, as shown in the preceding table, 109 left the service during 1907. The causes

^a Decision and order of the Railroad Commission of Wisconsin in *Lorenz and Lorenz et al v. Wisconsin Telephone Co.*, p. 67.

of dismissal or resignation as stated for these 109 cases were as follows:(^a)

Dismissed:

1. Incompetent.....	21
2. Poor attendance.....	2
3. Insubordination.....	6
4. Reduction in force.....	1
5. Miscellaneous.....	2
Total.....	32

Resigned:

1. Ill health.....	14
2. Dissatisfaction.....	5
3. Needed at home.....	2
4. Married.....	10
5. Sickness in family.....	2
6. New positions.....	14
7. Unknown.....	21
8. Miscellaneous.....	9
Total.....	77

Grand total..... 109

The relation between the wage rate and this loss of force which so materially shortens the average length of service, and in many cases cripples the service to the public, is shown in the following tables furnished by the Wisconsin Railroad Commission regarding the Milwaukee exchanges.

This table shows the number and per cent of telephone operators in these exchanges on January 15, 1907, and on January 1, 1908. It also shows the number of operators employed at these dates who left the service during the years 1907 and 1908, specifying the number and per cent of those who received each daily wage at time of leaving:

NUMBER AND PER CENT OF TELEPHONE OPERATORS IN MILWAUKEE EXCHANGES RECEIVING EACH SPECIFIED DAILY WAGE, JANUARY 15, 1907, AND JANUARY 1 1908, AND NUMBER AND PER CENT, BY WAGE CLASSES, WHO LEFT THE SERVICE DURING 1907 AND 1908.

Daily wage.	Operators in service January 15, 1907.		Operators leaving during 1907.		Operators in service January 1, 1908.		Operators leaving during 1908.	
	Number.	Per cent of total operators.	Number.	Per cent of total leaving.	Number.	Per cent of total operators.	Number.	Per cent of total leaving.
\$0.50.....	22	7.6	18	16.5	4	1.0	1	1.1
\$0.75.....	58	20.0	24	22.0	143	35.1	37	42.0
\$0.85.....	47	16.2	18	16.5	43	10.6	7	8.0
\$1.00.....	47	16.2	11	10.1	39	9.6	17	19.3
\$1.15.....	55	18.9	19	17.4	50	12.3	10	11.4
\$1.25.....	27	9.3	7	6.4	90	22.1	11	12.5
\$1.35.....	24	8.2	10	9.2	25	6.1	5	5.7
\$1.50.....	3	1.2	-----	-----	6	1.5	-----	-----
\$1.65.....	7	2.4	2	1.8	7	1.7	-----	-----
Total.....	290	100.0	109	100.0	407	100.0	88	100.0

^a Decision and order of the Railroad Commission of Wisconsin in *Lorenz and Lorenz et al. v. Wisconsin Telephone Co.*, p. 70.

This table indicates the percentage of operators employed at a given wage per day on January 15, 1907, and January 1, 1908, and with reference to these operators the percentage of resignations or dismissals during 1907 and 1908 falling in the specified wage classes. The figures for 1907 show, for instance, that while 7.6 per cent of the employees received 50 cents a day on January 15, 1907, 16.5 per cent of the resignations or dismissals during 1907, for employees on the pay roll January 15, were from this wage class. Twenty per cent received 75 cents a day, while 22 per cent of resignations were from this wage class. With the exception of those receiving \$1.35, the per cent of resignations for those receiving \$1 and over is below the percentage of operators in those classes. In 1908, as the table shows, the tendency of the lower paid employees to leave is very marked, the 50-cent rate having been practically abolished, and 35.1 per cent receiving 75 cents a day on January 1, 1908, while 42 per cent of the resignations during 1908 are from those at that rate. The resignation per cent falls below the employment per cent after the wages reach \$1.15 per day.

So far, therefore, as quality of service to the public depends upon length of service of the corps of operators in any given exchange, these figures seem to show that the quality can be improved and length of service materially increased on the average by raising the standard of wages to a point where excessive resignations cease.

TEAM WORK.

As stated above, the new operator is placed between two more experienced ones, who help her at times by reaching over from either side and plugging in on her calls. This is also done whether the operator is experienced or not, if the calls accumulate in one position faster than the operator can handle them. In such cases the operator on either side will reach over and help; this is called "team work." When, however, the load is at its "peak," and everybody has more than enough to do, the "team work" theory of lightening the load by dividing it practically fails. At such times, however, the supervisor may call any operator not busy to plug in and help the girl handle her calls.

The duties of the supervisor consist, first, in walking up and down behind the operators at work and seeing that they properly attend to their duties, and secondly, in assisting operators who are unable to handle the calls that come in. This the supervisor does by calling out the number of the signal or subscriber who is calling but who is not receiving attention because of the number of other calls coming in to that position; and any operator hearing the number so called who is not busy is expected to plug in on that number and make the connection. This is made possible by the fact, already referred

to, that all the lines entering a given exchange are looped throughout the entire board, so that any number may be reached from any section on the board. In this way the supervisors are able to assist materially in distributing the load and relieving an operator who may be temporarily swamped with calls. Even this, however, fails to be very effective when all the positions are being taxed to their capacity.

SUPERVISION.

The assistance rendered the operator by the supervisor is unquestioned; her presence, however, adds materially to the mental and nervous strain of the work, especially if she is herself nervous and irritable. Each supervisor supervises the work of a given number of girls, and the knowledge of the continual presence of a watcher at their back, especially where it is not a personally sympathetic watching, creates of itself an element of the nervous strain.

The position of monitor is another of the supervisory positions. Of these there are few as compared with supervisors, and they are not in view of the operators. The monitor has a board which may be called an observation board, which is connected with every position in the exchange, and from which she can plug in on any operator and follow her work in detail, hear the calls made, replies given, and the entire method of handling the calls. Without discussing the necessity which the companies claim of such close and double supervision of the work, the consciousness of being under unremitting surveillance of this character is admittedly a contributory element in the nervous strain of operators.

In connection with the supervision of the operators' work, besides supervisors and monitors most companies maintain a corps of "service testers." They are men who send in calls from various public and private telephones as though they were subscribers, in order to test the condition of the lines as well as of the service rendered. It is usual for companies to make a monthly service report in which all errors recorded by the "testers" are given under the name of the operator on whose position the error occurred. Gradings of operators' standing is made from this record. An operator who gets a low grade becomes more nervous out of fear that any call may be one sent in by a tester. In one city prizes are given to the day force and evening force of the two offices showing the best service record for the month. These prizes are usually in the form of books or pictures for the rest rooms, and are the source of much pleasure to the winning offices. On the other hand, when, near the end of the month, two or three offices have about the same service standing, the strain on the operators is severe. The service prize is, therefore, not an unmixed blessing for the operator.

THE PUBLIC AND THE OPERATOR.

The most serious and important cause of nervousness and confusion comes from the subscribers themselves. To make this clear, and at the risk of some repetition, let us watch an operator at her work during the "peak of the load." The lines terminating in her position are, we will say, 100, that is 100 telephone users send their call signals directly in the first instance to her position. With each call a light flashes on a signal cap in front of her. Several lamps glow simultaneously, showing that a number of users are calling for numbers at the same time. She is expected to give all the quickest possible service in the order in which their calls come in, but when several signals come at once and others come before these can be cared for the order of calls is necessarily lost and the effort is concentrated merely on clearing the board, or catching up. It must not be forgotten that with each signal there is not only the flashing of a small light in the operator's eyes, but there is a clicking sound in her ears through the receivers fastened to her head. So when the impatient subscriber, angry because his call has not been answered, moves the receiver hook of his 'phone up and down rapidly, he flashes the signal light in front of the operator, and produces a click in her ears every time the hook goes up and down. The consciousness of numbers of people waiting for call connections she is unable to make, and that each one is growing more impatient each second; that a supervisor is standing behind her either hurrying her or calling her numbers to be taken by other operators; that a monitor may plug in and criticise any moment—these, with the height of up-reach and length of side-reach, go to form the elements of strain on the operator who is "overloaded."

What makes the condition worse is that when she reaches the call of an irritated subscriber and says "Number please," instead of giving the number the "party" begins to scold and demands to know why he has waited so long. She is not allowed by the rules of most companies to answer this, but may only repeat "Number please" until the caller gives the number so that she can make the connection. For with most companies the operator may not "talk back" no matter how much she is being abused by a subscriber; the only words she dare use over a 'phone are the set phrases printed in her book of instructions and which are supposed to cover all possible contingencies. If anything beyond set phrases must be said, the operator must connect the calling party with the "information desk," as only "information operators" may answer any questions or make any explanations.

But all this has delayed the work of the operator, increased the number waiting for connections, and irritated more subscribers who will scold when she asks them for "Number please."

If the people who put off their morning telephoning until 11.30 and their afternoon telephoning until 5 p. m. would remember that by so doing they are coming in with the general rush which makes up the "peak of the load" and that they can not expect as prompt service as at other hours; and that the operator will doubtless answer their calls just as quickly as she can, and above all, that to scold her when she does answer instead of giving her the number wanted delays and obstructs the service at the most unfortunate time and in the most useless way, the working life of the telephone operators would be easier.

It must be said that it is only when these rush periods last for a considerable time that they become a source of serious strain.

TIME LIMIT FOR MAKING CONNECTIONS.

The time limit for making connections is exceedingly short by the regulations of some companies; others have very liberal limits; while some have no regulations at all.

The following table will show the range and general trend of the rules of various companies relative to this matter:

TIME ALLOWANCE FOR HANDLING CALLS REPORTED BY VARIOUS COMPANIES.

Classified time allowance for handling calls—"A" board.	Number of companies.
Under 4 seconds.....	6
4 and under 5 seconds.....	^a 15
5 and under 6 seconds.....	5
6 and under 8 seconds.....	.....
8 seconds and over.....	9
Total companies having regulations.....	35
Companies having no regulations.....	4
Total companies reporting.....	39

^a Including the Chicago Telephone Company, in which the allowance is 3 to 4 seconds in 3 exchanges.

In case of the "A" board operator a number of distinct operations for each local and for each trunked call is required. The "A" board is that which originally receives the call of a subscriber; the "B" board is the one used when calls for a party whose 'phone has its "A" board connection in another exchange is transferred to the exchange having power to make the connection. That is to say, if the owner of telephone Main 101 wants to call Main 125 he takes down the receiver, which signals the operator in the position where his 'phone line enters the exchange; when this operator answers, and he gives the number Main 125, she plugs in on that number and the connection is complete. This is an untrunked or "A" board call. If the owner of Main 101 wants a man whose number is Central 205, his signal is to the same operator as before (from his 'phone he can

signal no one else). When this operator gets his number, she signals another operator at whose position the wires from other exchanges connect with Main; this is an outgoing trunked call which is trunked to Central when the connection with Central 205 is made. At Central this becomes an incoming trunked call, or call originating outside the exchange.

In the large city exchanges most of the originating or "A" board calls are trunked out to other exchanges, and in these become incoming trunked calls. In the Harrison Exchange in Chicago 75 per cent of all originating calls are trunked to other exchanges, while in the Courtland Exchange in New York City 90 per cent of calls are trunked out.

The number of distinct operations or movements which the "A" board operator must perform for each call, and each kind of call, is made sufficiently clear by the following extracts, from the lessons used in one of the training schools.

DESCRIPTION OF A COMPLETED LOCAL OR "A" BOARD CONNECTION.

(1) When a subscriber takes the receiver off the hook of his telephone the line and pilot lamp signals light up in front of "A" operator.

(2) She picks up an inside cord, known as an answering cord, inserts the plug in answering jack above the line lamp signal, and at the same time throws the corresponding listening key toward the face of switchboard. The plug puts out the lights, and the key enables operator to talk to subscriber.

(3) In a clear, distinct tone, with the rising inflection on the word "please," she says, "Number, please?" "Number, please?" to be repeated if no response is received the first time. If subscriber can not be heard, operator will say, "Please come closer to your telephone."

If subscriber fails to give name of the exchange wanted, operator will say, "What exchange, please?"

If subscriber gives name of exchange, but omits number, operator will say, "What number, please?"

(4) The subscriber gives number wanted, "Central 128." Operator repeats it back to subscriber, separating the figures, as, "Central one-two-eight."

(5) She then picks up outside cord, known as the connecting cord, corresponding to answering cord in use, locates multiple jack of Central 128, and lightly taps the tip of plug against the outer rim of multiple jack three times, resting on the last stroke.

(6) If no sound is heard, connecting cord is inserted in multiple jack,

(7) And the corresponding ringing key drawn toward operator steadily for at least two seconds, thus enabling her to ring the bell on the called party's instrument, after which the key is allowed to fall back to the normal or vertical position, thus leaving the line clear for both parties to talk. The insertion of the plug causes the lamp on the connecting cord to light up. The lamp remains lighted until the called party lifts the receiver off the hook of telephone,

when it will go out, both cord lamps remaining out while the parties are talking.

(8) When both parties are through talking and hang receivers on the hooks, both cord lamps will light up again. Operator then disconnects by taking down inside cord first and then outside cord, and restoring them to their regular positions. Operator will always disconnect when the inside lamp lights, or both, but not when only outside lamp lights.

The cord lamps are called supervisory signals or disconnect signals.

DESCRIPTION OF A "B" CONNECTION.

(1) When an "A" operator in an exchange receives an order for a number in another exchange, she closes listening key,

(2) and depresses call-circuit key to exchange wanted (being careful not to break in on the order wire), thereby connecting her operator's set with that of the "B" operator's set in the distant exchange, and gives number called for.

(3) "B" operator assigns "A" operator a trunk line number, and

(4) "A" operator releases order wire key,

(5) and opening listening key,

(6) tests trunk line assigned; if no sound is received

(7) she inserts the plug in a trunk line jack,

(8) and closes the listening key.

(9) When called party lifts receiver off the hook of telephone, the outside supervisory lamp goes out, both lamps remaining out while parties are talking. When both parties are through talking and hang receivers on hooks again, this action throws a light on the "A" operator's disconnect signals, who will disconnect by taking down her inside cord first, and then the outside cord; the act of taking down the outside cord or removing it from the trunk line assigned throws a light on the "B" operator's disconnect signal, who will disconnect by taking down her trunk line cord and restoring it to its regular position.

"B" board operators, handling only incoming trunked calls, have very much less to do than "A" board operators—that is, there are few operations or movements to be performed, and the question of load seldom becomes serious; 500 or 600 calls per hour really amounts to no more in actual work than 225 for an "A" board operator. For this reason, the "load" of "B" operators has been here ignored.

BREAKING POINT OF EFFICIENCY.

All companies periodically take a record of the number of calls entering each position in each exchange during the twenty-four hours of the day for which these records are made. They are called "peg counts." The purpose in taking them is primarily to furnish data to equalize the load between the several positions or operators in the exchange. They may of course be used by local managers occasionally to "equalize" the load up to the breaking point for all at all hours, but it must in fairness be said that these cases do not constitute the rule—in fact, are exceptional.

It is generally conceded that more than 225 calls an hour is not desirable from any point of view. Most of the experts for the companies consider 225 calls an hour as the "breaking point of efficiency" or the number which can not be exceeded greatly or for many minutes at a time without seriously impairing the service rendered by the company to the public. It is safe to say that the "breaking point" of the operator's health is not far from the breaking point of efficient work.

It must be remembered, however, that where the operator has frequent lulls in the load, sudden spurts may come when for a few minutes she may handle calls at the rate of 600 or even more an hour without serious danger to herself or detriment to the service; in the continuity of high pressure lies the danger to the nervous system of the operator as well as to the efficiency of her work.

In the general Table I, E, pages 145 to 150 of this report, will be found the average number of calls per hour, by cities, taking all the exchanges from which peg counts were secured for this report.

To give this information in a more detailed way, the accompanying table shows by specific exchanges in selected cities the average number of calls for each hour of the day. This is followed by diagrams showing the gradual rise of the traffic curve until the peak of the morning load is reached, its decline after the lunch hour arrives, and its rise to the peak of the afternoon load; the operator's curve accompanying it.

These have been selected to show both business and residence district exchanges.

Accepting an average of 225 calls an hour as the breaking point, a glance at the table shows a number of exchanges in various cities where that point is exceeded on the average for all operators in the exchange. In some it is exceeded for several hours at a time. When the average for a very large number of operators exceeds 225 calls per hour there is a probability at least that individual positions or operators are greatly exceeding this; and that to make up this average for an hour, there must be times when the individual loads would seem excessive.

The first table, which is for such exchanges only as employ six operators or more, deals for the most part with the larger cities, and shows continuous excess "loading" to be more pronounced in the Pacific coast cities than elsewhere, though some southern cities carry a very high average for considerable periods of time.

EXCHANGES EMPLOYING SIX OPERATORS OR MORE IN WHICH PEG COUNT EXCEEDS
225 CALLS PER HOUR.

Company.	City.	Exchange.	Hour ending—	Number of calls.
Bell Telephone Co. of Missouri.....	East St. Louis, Ill.....	East St. Louis..	8 a. m.	248.5
			9 a. m.	230.8
Cumberland Telephone and Telegraph Co.	Louisville, Ky.....	South.....	12 m.	229.9
			9 p. m.	227.7
Cumberland Telephone and Telegraph Co.	Nashville, Tenn.....	Main.....	10 a. m.	234.9
			2 p. m.	225.6
			3 p. m.	256.3
Missouri and Kansas Telephone Co.....	Kansas City, Mo.....	Main.....	10 a. m.	231.4
			7 p. m.	260.4
		Hickory.....	9 a. m.	230.8
		West.....	9 p. m.	281.7
	St. Joseph, Mo.....	Main.....	8 p. m.	232.5
	Chanute, Kans.....	Chanute.....	2 p. m.	225.4
	Sedalia, Mo.....	Sedalia.....	7 p. m.	230.2
Northwestern Telephone Exchange Co...	St. Paul, Minn.....	Dale.....	9 a. m.	233.8
			10 a. m.	240.6
Pacific Telephone and Telegraph Co.....	Los Angeles, Cal.....	East.....	7 a. m.	249.3
			9 a. m.	229.3
			10 a. m.	232.4
			6 p. m.	285.2
			7 p. m.	317.0
			8 p. m.	303.0
			9 p. m.	267.4
		Boyle.....	8 a. m.	225.7
			8 p. m.	251.2
Pacific Telephone and Telegraph Co.....	Portland, Oreg.....	South.....	8 p. m.	263.5
		Tabor.....	8 a. m.	238.7
			9 a. m.	227.8
			2 p. m.	246.0
		East.....	10 a. m.	247.5
			11 a. m.	241.4
Pacific Telephone and Telegraph Co.....	San Francisco, Cal.....	Douglas.....	8 p. m.	241.0
			11 a. m.	231.6
			8 p. m.	226.0
		Market.....	7 a. m.	266.0
			11 p. m.	279.0
		Franklin.....	9 a. m.	229.4
			11 a. m.	255.1
			2 p. m.	247.7
			3 p. m.	308.3
			4 p. m.	241.9
			7 p. m.	230.5
			8 p. m.	258.3
Pacific Telephone and Telegraph Co.....	Seattle, Wash.....	West.....	10 a. m.	242.6
		Ballard.....	10 a. m.	228.8
			11 a. m.	235.8
			5 p. m.	226.3
		Queen Anne....	9 a. m.	228.7
			5 p. m.	232.8
			6 p. m.	283.2
		North.....	10 a. m.	243.2
			12 m.	225.6
Southern Bell Telephone and Telegraph Co.	Atlanta, Ga.....	Main.....	4 p. m.	281.6
			10 a. m.	238.7
			7 p. m.	234.2
			8 p. m.	239.2
Southern Bell Telephone and Telegraph Co.	Birmingham, Ala.....	Ivy.....	8 p. m.	232.6
		Main.....	10 a. m.	232.2
			11 p. m.	301.5

It was found that loads beyond the accepted breaking point were frequently found in the small as well as in the large exchanges. While the average load in an exchange where no more than five operators are employed may not mean such extremes of high loads for individuals as in larger exchanges, yet it does probably mean a higher load for everybody. The table following gives the average load per hour, where that average exceeds 225 calls, in the small exchanges employing less than six—that is, five or less switchboard operatives.

EXCHANGES EMPLOYING LESS THAN SIX OPERATORS IN WHICH PEG COUNT
EXCEEDS 225 CALLS PER HOUR.

Company.	City.	Exchange.	Hour ending—	Number of calls.
Bell Telephone Co. of Missouri.....	St. Louis, Mo.....	Kirkwood.....	8 a. m....	243.0
Missouri and Kansas Telephone Co.....	Smithville, Mo.....	Smithville.....	7 p. m....	241.0
			8 p. m....	237.0
	Kirksville, Mo.....	Kirksville.....	8 a. m....	226.5
	St. Joseph, Mo.....	South.....	8 a. m....	262.5
	Fayette, Mo.....	Fayette.....	8 a. m....	235.5
			9 a. m....	283.5
			10 a. m....	275.5
			6 p. m....	231.5
	Fort Scott, Kans.....	Fort Scott.....	10 a. m....	226.2
			2 p. m....	249.3
	Arkansas City, Kans.....	Arkansas City.....	8 a. m....	285.7
	Coffeyville, Kans.....	Coffeyville.....	8 a. m....	229.3
			9 a. m....	252.3
			10 a. m....	237.5
			5 p. m....	233.0
	Hutchinson, Kans.....	Hutchinson.....	10 a. m....	242.7
			1 p. m....	264.0
			8 p. m....	310.3
	Iola, Kans.....	Iola.....	9 a. m....	237.8
	Independence, Mo.....	Independence.....	3 p. m....	253.3
			6 p. m....	278.3
			7 p. m....	263.5
			8 p. m....	270.0
	Carrollton, Mo.....	Carrollton.....	6 p. m....	242.8
			7 p. m....	264.2
			8 p. m....	246.3
	Council Grove, Kans.....	Council Grove.....	8 a. m....	235.0
			10 a. m....	230.0
			5 p. m....	232.5
			7 p. m....	254.7
	Marion, Kans.....	Marion.....	10 a. m....	292.0
			2 p. m....	269.0
			3 p. m....	275.0
	Maryville, Mo.....	Maryville.....	10 a. m....	232.0
			11 a. m....	245.0
			6 p. m....	230.0
	Monett, Mo.....	Monett.....	1 p. m....	257.0
Northwestern Telephone Exchange Co....	Sioux Falls, S. Dak.....	Sioux Falls.....	9 a. m....	256.8
	Stillwater, Minn.....	Stillwater.....	7 p. m....	243.0
	Owatonna, Minn.....	Owatonna.....	12 m....	233.0

In the matter of efficiency of service rendered the public it is the common experience of telephone companies that an underload is as bad, if not worse, than an overload, and that unless an operator has work enough to require constant attention she is liable to do poorly the little she has to do. Operators very generally agree with the managers upon this point.

While of course the real test of load is the individual load, yet in the absence of individual record the average hourly record by typical exchanges becomes of importance. The table following relating to typical exchanges of the Bell system in both business and residential districts of large cities and smaller towns gives an idea of the general range of "traffic loads" in telephone offices:

NUMBER OF OPERATORS AND AVERAGE CALLS PER OPERATOR DURING EACH HOUR OF THE DAY IN TYPICAL EXCHANGES OF SELECTED CITIES AND TOWNS.

Hour ending—	San Francisco, Cal.: Kearny.		San Francisco, Cal.: West.		Atlanta, Ga.: Main (business).		Atlanta, Ga.: Ivy (residence).		Minneapolis, Minn.: South.	
	Operators.	Calls per operator.	Operators.	Calls per operator.	Operators.	Calls per operator.	Operators.	Calls per operator.	Operators.	Calls per operator.
1 a. m.	3	16.0	4	14.5	3	37.0	1	5.0	1 ¹ / ₂	68
2 a. m.	3	7.3	4	9.8	3	27.7	1	6.0	2 ¹ / ₂	36
3 a. m.	3	4.3	4	9.0	3	16.0	1	-----	2 ¹ / ₂	30
4 a. m.	3	2.3	4	9.8	3	15.7	1	-----	2 ¹ / ₂	18
5 a. m.	3	8.0	4	11.5	3	81.3	1	-----	2 ¹ / ₂	16
6 a. m.	3	13.7	4	14.3	5	106.0	1	74.0	2 ¹ / ₂	16
7 a. m.	3	30.3	4	25.5	13	55.2	2	151.0	2	94
8 a. m.	6	103.5	9 ¹ / ₂	144.9	25	107.0	6	135.7	7	113
9 a. m.	19	151.1	24	200.4	37	160.5	8	186.5	18	183
10 a. m.	40	202.9	31	242.6	40	238.7	13	153.8	19 ¹ / ₂	214
11 a. m.	40	188.4	31	191.9	41	215.8	9	137.2	19 ¹ / ₂	169
12 m.	38 ¹ / ₂	169.4	29	194.5	36	181.3	9	129.4	19	129
1 p. m.	27 ¹ / ₂	169.8	25 ¹ / ₂	186.7	35	181.7	9	109.1	13	166
2 p. m.	36	162.2	25 ¹ / ₂	210.8	34	198.8	9	114.8	12 ¹ / ₂	204
3 p. m.	37	179.5	24 ¹ / ₂	157.3	36	163.8	10	115.8	13	154
4 p. m.	36 ¹ / ₂	183.3	22 ¹ / ₂	142.6	36	195.9	10	130.8	13	128
5 p. m.	32	213.9	25	152.6	36	204.6	8	111.6	12 ¹ / ₂	140
6 p. m.	16 ¹ / ₂	185.8	25	179.6	36	193.7	10	111.7	15	130
7 p. m.	6	65.5	25	150.0	31	234.2	7	157.7	13	118
8 p. m.	5	123.2	25	219.0	25	239.2	5	232.6	13	144
9 p. m.	3	39.7	24 ¹ / ₂	151.6	20	120.7	4	199.0	13	85
10 p. m.	3	16.3	14	68.1	11	90.1	3	132.3	8 ¹ / ₂	47
11 p. m.	3	40.0	6	57.5	6	24.5	2	27.0	3 ¹ / ₂	55
12 p. m.	3	25.3	4	64.5	3	57.0	1	23.0	1 ¹ / ₂	98

Hour ending—	Minneapolis, Minn.: Main.		New Orleans, La.: Hemlock (residence).		New Orleans, La.: Main (business).		New York, N. Y.: Broad Central (business).		New York, N. Y.: Riverside Central (residence).	
	Operators.	Calls per operator.	Operators.	Calls per operator.	Operators.	Calls per operator.	Operators.	Calls per operator.	Operators.	Calls per operator.
1 a. m.	2	42.5	3	26.3	8	53.3	4	-----	9	7.6
2 a. m.	13 ¹ / ₂	49.3	3	17.0	8	34.5	4	-----	9	6.2
3 a. m.	13 ¹ / ₂	44.0	3	12.0	8	27.1	4	0.3	8	2.9
4 a. m.	13 ¹ / ₂	40.0	3	19.0	8	24.8	4	-----	6	1.5
5 a. m.	13 ¹ / ₂	38.0	3	23.0	8	22.1	4	1.5	8	1.5
6 a. m.	2	35.0	3	25.3	8	32.4	5	1.2	9	2.6
7 a. m.	24	58.0	3	62.7	10	42.3	8	7.8	15	7.9
8 a. m.	7 ¹ / ₂	72.0	6	68.0	25	64.6	10	11.4	20	49.1
9 a. m.	24	139.5	11	98.3	52	124.8	15	47.6	34	88.9
10 a. m.	26	193.0	11	125.4	52	206.2	50	119.8	45	144.1
11 a. m.	26	186.7	11	135.6	52	190.4	76	128.1	45	121.0
12 m.	24 ¹ / ₂	192.7	11	125.8	52	154.1	76	124.8	40	114.1
1 p. m.	22	190.8	11	102.0	51	115.3	76	89.4	42	98.4
2 p. m.	23 ¹ / ₂	145.0	11	104.3	51	105.3	76	91.3	38	99.7
3 p. m.	26	140.1	10	108.2	51	179.5	76	106.2	38	95.7
4 p. m.	25	123.0	10	96.5	51	169.8	76	108.6	33	90.6
5 p. m.	23	152.9	10	97.8	51	149.0	76	89.7	33	86.7
6 p. m.	24 ¹ / ₂	141.5	10	112.5	43	135.2	53	61.1	34	104.1
7 p. m.	13 ¹ / ₂	121.4	10	115.0	43	82.0	27	41.1	33	108.5
8 p. m.	13	133.8	10	112.4	43	83.6	10	20.8	32	105.8
9 p. m.	12	93.7	10	67.9	15	161.1	10	8.3	31	75.6
10 p. m.	11	102.5	5	82.4	8	125.0	8	3.9	22	47.5
11 p. m.	7 ¹ / ₂	64.1	3	60.3	8	86.0	7	1.1	15	29.6
12 p. m.	2 ¹ / ₂	92.0	3	28.7	8	64.3	6	1.5	11	15.6

NUMBER OF OPERATORS AND AVERAGE CALLS PER OPERATOR DURING EACH HOUR OF THE DAY IN TYPICAL EXCHANGES OF SELECTED CITIES AND TOWNS—Concluded.

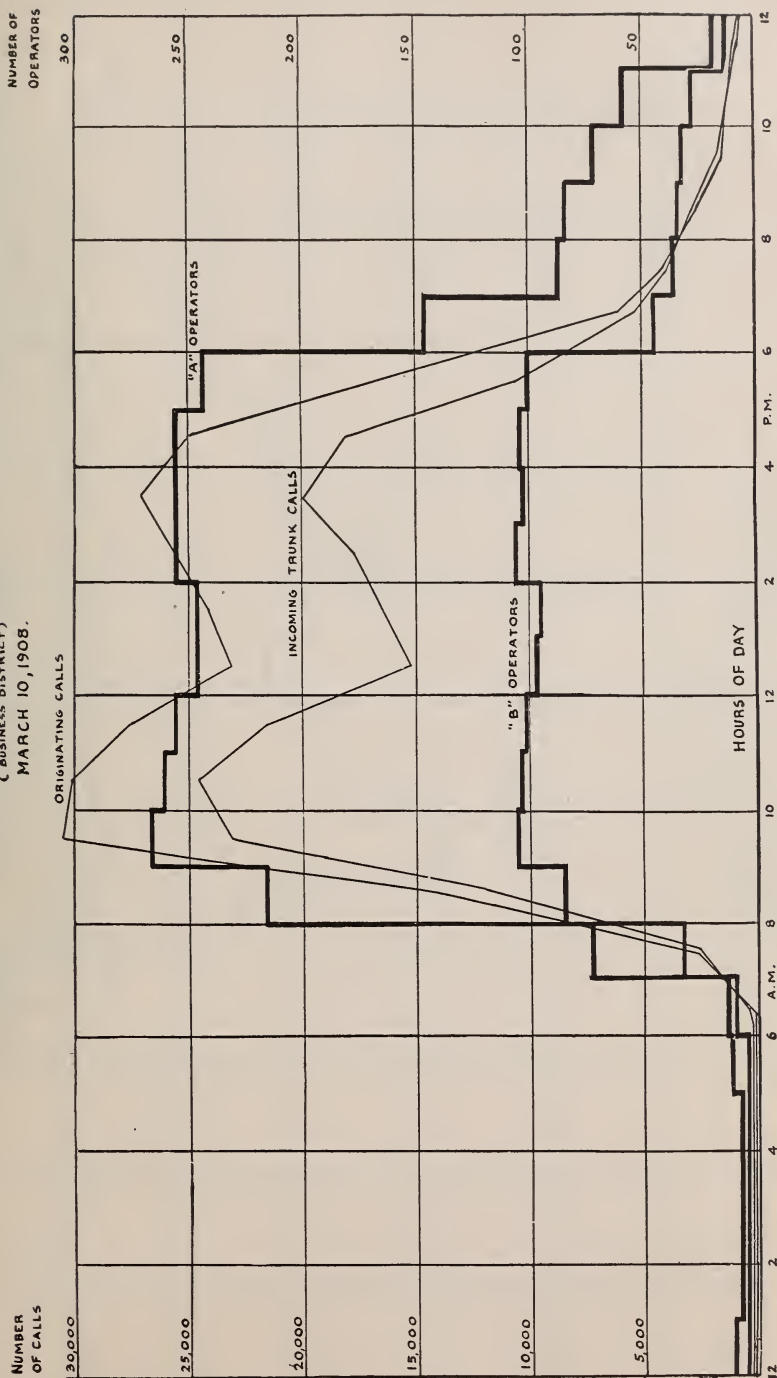
Hour ending—	Chicago, Ill.: Central.		Chicago, Ill.: Harrison.		Stillwater, Minn.		Coffeyville, Kans.		Independence, Mo.	
	Opera- tors.	Calls per opera- tor.	Opera- tors.	Calls per opera- tor.	Opera- tors.	Calls per opera- tor.	Opera- tors.	Calls per opera- tor.	Opera- tors.	Calls per opera- tor.
1 a. m.	6	19.8	7	35.4	.....	.....	.....	.....	.....	.....
2 a. m.	6	12.7	7	16.1	.....	.....	.....	.....	.....	.....
3 a. m.	6	9.8	7	10.6	.....	.....	.....	.....	.....	.....
4 a. m.	6	6.3	7	9.3	.....	.....	2	142.0	1	5.0
5 a. m.	6	3.5	7	10.3	.....	.....	2	25.0	1	14.0
6 a. m.	6	4.7	7	15.0	.....	20.0	2	57.0	1	22.0
7 a. m.	8	16.6	7	30.9	1	38.0	2	76.0	3	74.3
8 a. m.	22	40.7	27	23.7	2	174.5	3	229.3	4	145.3
9 a. m.	97	80.2	76	94.5	4	159.8	4	252.3	4	194.3
10 a. m.	111	172.7	95	173.1	4	173.5	4	237.5	4	206.3
11 a. m.	111	178.6	95	170.0	4	152.0	4	203.8	4	161.0
12 m.	111	176.7	95	157.1	3½	128.6	4	151.8	4	151.3
1 p. m.	105	151.2	80	154.4	3	184.0	4	145.0	4	146.5
2 p. m.	103	163.0	88	158.9	3	133.3	4	186.8	4	164.0
3 p. m.	111	170.5	95	149.4	3	149.7	4	147.5	4	253.3
4 p. m.	111	168.4	95	156.0	3	107.3	4	182.3	4	197.3
5 p. m.	111	176.9	95	171.7	3	144.0	4	233.0	4	168.0
6 p. m.	106	124.0	87	136.8	3	127.7	4	193.0	4	278.3
7 p. m.	70	76.9	60	58.5	3	243.0	4	176.8	4	263.5
8 p. m.	41	47.0	37	54.5	3	204.7	4	102.8	4	270.0
9 p. m.	41	29.2	35	42.9	3	86.0	4	76.0	4	77.8
10 p. m.	41	12.5	29	26.5	2	43.5	2	79.0	2	92.0
11 p. m.	8	60.4	7	43.4	1	28.0	.....	.....	.....	.....
12 p. m.	8	27.4	7	67.1	1	15.0	2	121.0	1	12.0

Several graphics or diagrams, to better illustrate the "load" in a telephone exchange, are printed on the pages following.

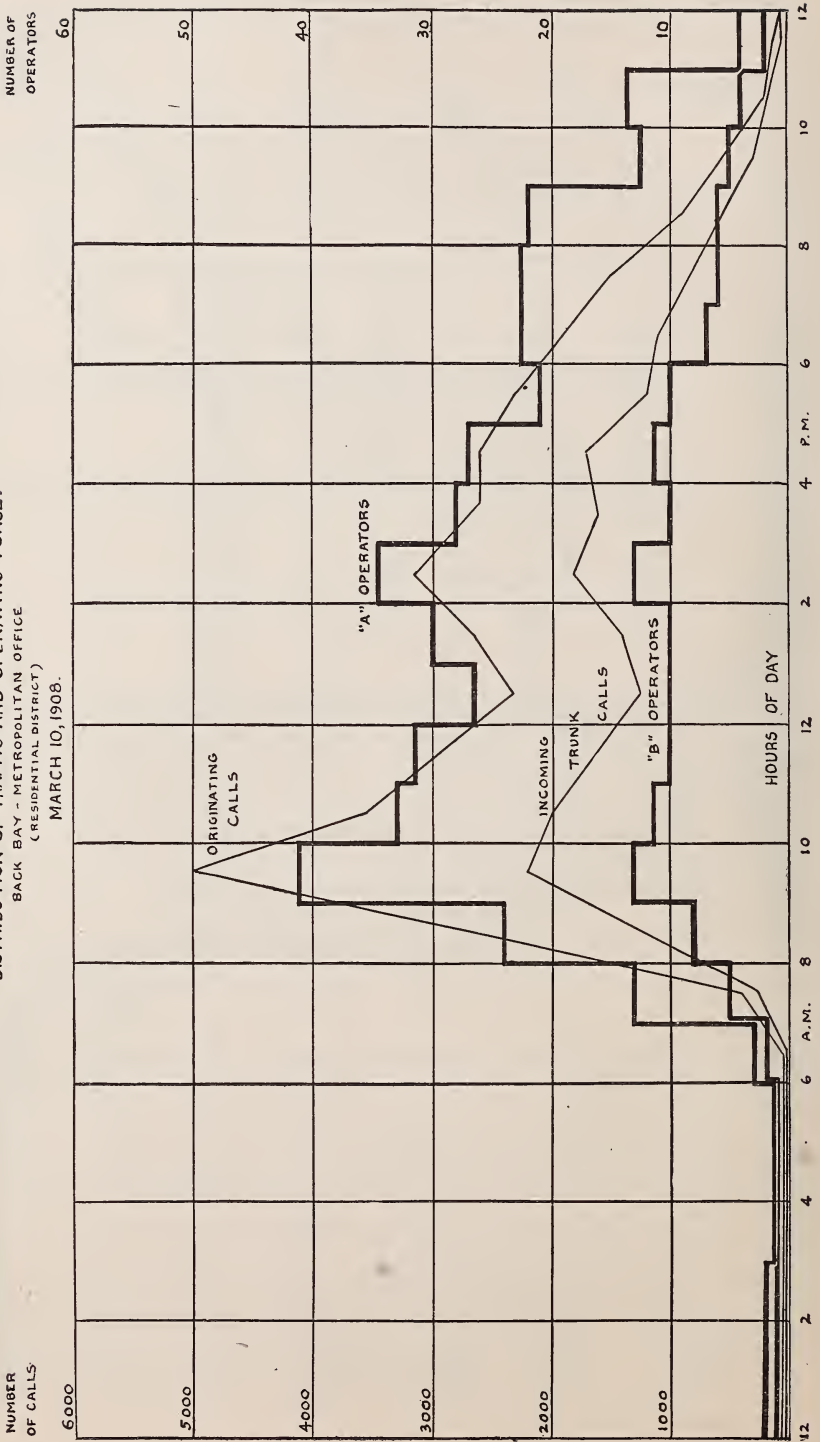
The first diagram shows the "operating curve" for an exchange in the business district of Boston. The figures at the left margin indicate the number of calls and are to be read by the lighter lines, which show the calls at the time of day indicated by the hours shown at the base. There are two of these lighter lines, one showing originating or "A" board calls; the other incoming calls trunked from other exchanges, or "B" board calls. The heavy lines indicate the operators, both "A" board and "B" board, as they relate to the number of calls.

For instance, at 8 a. m. the number of "A" board operators coming on increases from approximately 35 to 225, and the "A" board calls run up to the "peak of the morning load" considerably before 10 o'clock. There are more than 30,000 calls with approximately 275 operators to handle them. By about 12.15 p. m. this load has run down to less than 25,000, when it starts upward again toward "the peak of the afternoon load." The disparity between the number of trunk calls and the number of "B" board operators as compared with originating calls and "A" board operators as here graphically shown has been explained before by the fact that a girl can handle twice as many calls on a "B" board as she can on an "A" board.

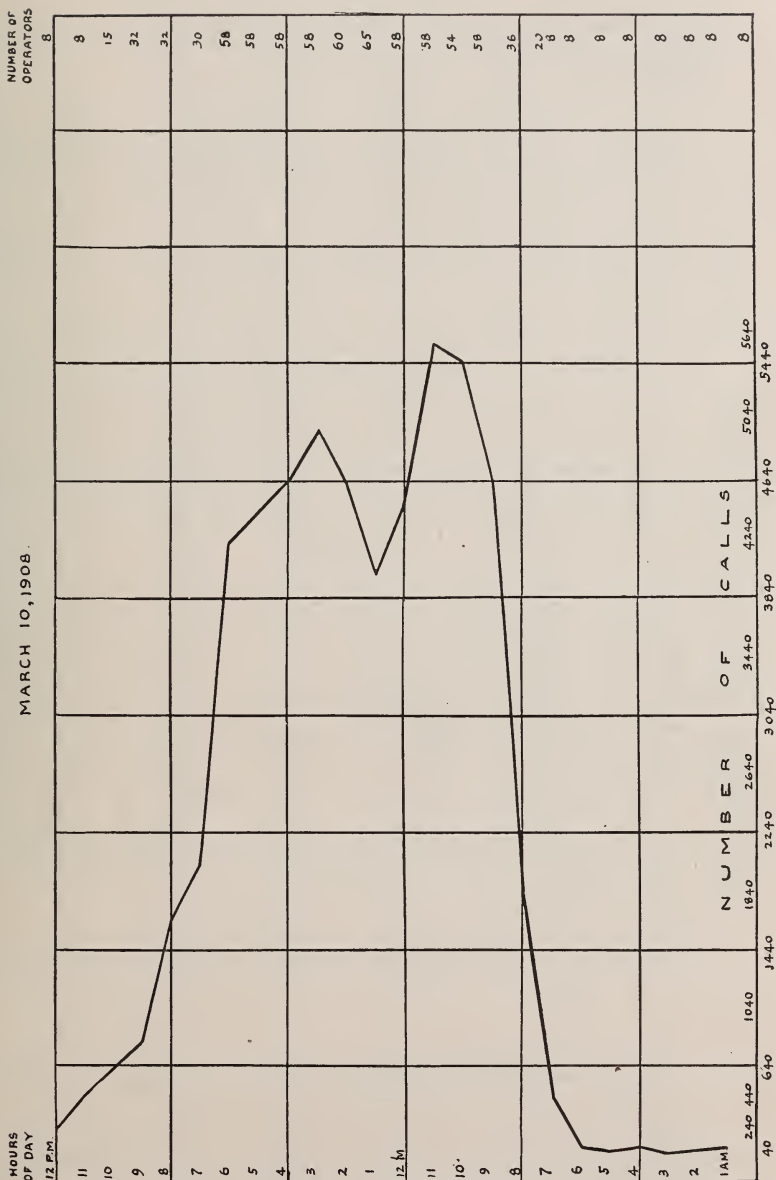
NEW ENGLAND TELEPHONE & TELEGRAPH CO.
 DISTRIBUTION OF TRAFFIC AND OPERATING FORCE.
 BOSTON METROPOLITAN OFFICES
 (BUSINESS DISTRICT)
 MARCH 10, 1908.



NEW ENGLAND TELEPHONE & TELEGRAPH CO.
DISTRIBUTION OF TRAFFIC AND OPERATING FORCE.
BACK BAY - METROPOLITAN OFFICE
(RESIDENTIAL DISTRICT)
MARCH 10, 1908.



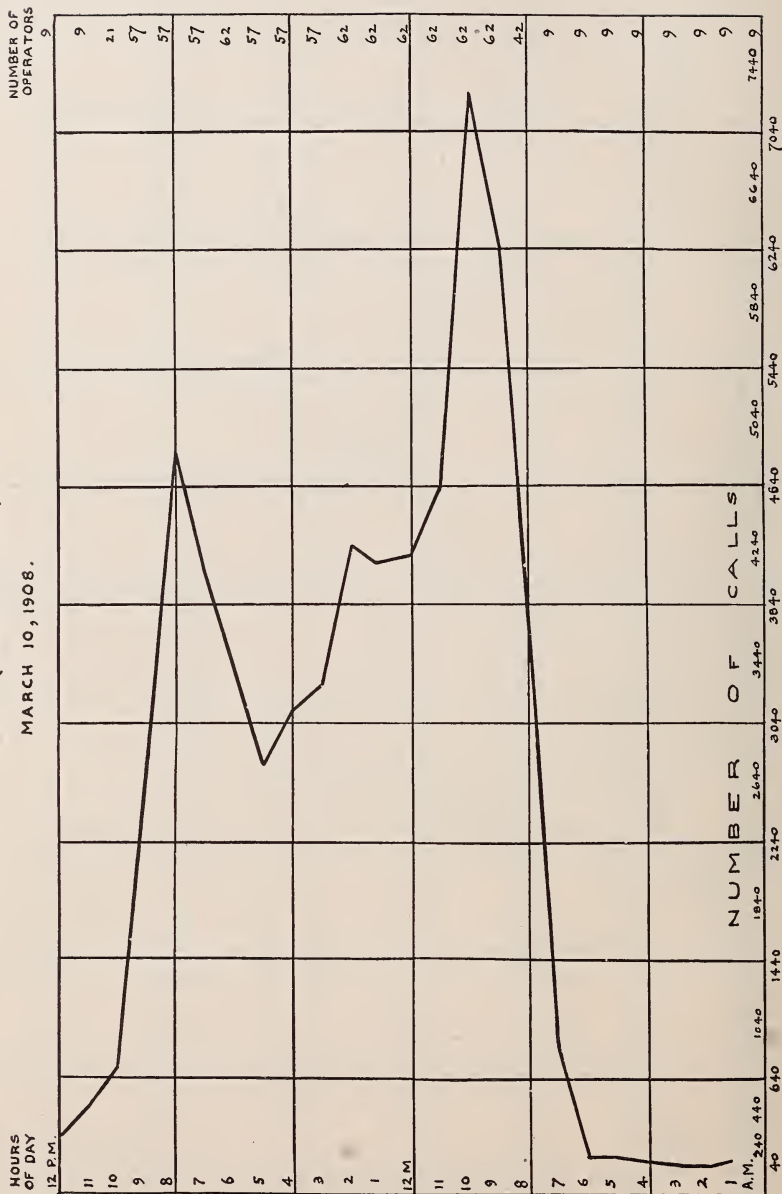
CINCINNATI & SUBURBAN BELL TELEPHONE CO.
DISTRIBUTION OF TRAFFIC AND OPERATING FORCE
CANAL OFFICE (BUSINESS DISTRICT)



CINCINNATI & SUBURBAN BELL TELEPHONE CO.
DISTRIBUTION OF TRAFFIC AND OPERATING FORCE

NORTH OFFICE (RESIDENTIAL DISTRICT)

MARCH 10, 1908.



The second diagram is for an exchange in the residential districts of Boston, and when taken in connection with the first diagram shows the hours at which "social calls" are most numerous as contrasted with calls in a business district or exchange.

The third and fourth diagrams are for Cincinnati, and while constructed on a different scheme, show the same facts, and will be easily understood even though one line is made to show the curve for both calls and operators.

The Royal Commission of Canada in its report on a dispute "between the Bell Telephone Company of Canada (Limited) and operators at Toronto, Ont." (pp. 65-78), goes more fully into the health conditions and consequences of employment for the telephone operator than has been done anywhere else. It has been thought highly important to give a brief summary of that report. Before doing so it seems necessary to preface such summary with an explanation of the situation the commission was facing.

The Bell Telephone Company at Toronto had for a series of years conducted its exchanges on a basis of a five-hour high-speed work-day for switchboard operators. The girls came to work in relays in such a way that they were worked to as near the "breaking point" as possible for five hours, without rest, and then their day's work was done.

The company itself investigated the system and decided that it was bad for the girls, for the company, and for the public. It announced that the five-hour day would be abolished and an eight-hour day—net working time—established. That is, the system in operation in the United States was to be established. The wages offered for the eight-hour day were not considered by the employees equivalent to the increase of hours, and a strike followed, which brought in the Royal Commission to make an inquiry.

It must therefore be borne in mind that the value of this inquiry is upon the result of a continuous heavy load for a considerable period of time—five hours—though in a few instances the physicians expressed themselves upon conditions quite general in the industry.

The commission introduces the testimony of physicians with the following statement:

Twenty-six medical practitioners gave evidence before the commission. Of this number six appeared at the request of the parties, the remainder were subpoenaed at the instance of the commission from among physicians of the city whom it was believed could speak with the authority and from a wide range of experience.

The physicians subpoenaed were nearly all selected from the medical faculty of the University of Toronto, and were, without exception, among the leading members of the profession in the city. A large number were summoned and attended for the purpose of giving testimony, but the evidence given was for the most part so much in accord on the main points at issue, that it was deemed unnecessary to prolong the inquiry by a further examination of medical witnesses. In no case had the commission any knowledge of the probable trend of the evidence to be given until hearing the testimony as delivered.

To secure a careful consideration of the matters on which it was specially desired to have an opinion, a memorandum containing mention of the following points was given to each witness some time prior to his examination:

"The effect—

"(a) Under 5-hour system—high pressure.

"(b) Under 5-hour system—low pressure.

"(c) Under 8-hour system—high pressure.

"(d) Under 8-hour system—low pressure.

"Upon—

"1. Optic nerve—by lights—finding places for connections.

"2. Auditory nerve—from calls, buzzing, shocks, etc.

"3. Vocal organs—continuous calling of numbers.

"4. Physical system—length of sitting—head and chest gear, reaching.

"5. Nervous system—from above cause operating together and continuously.

"If accentuated by system of observation boards, monitors, supervisors, complaints of subscribers, etc."

The following summarizes as briefly as possible the material in the report:

Dr. Murray MacFarlane, eye and ear specialist, 15 or 16 years in Toronto, had treated a considerable number of these employees of the telephone company suffering from eye strain principally, also from nervous affection of the ear, did not find any disease due particularly to the flashing of the lights, and the switchboard—watching the lights continually is more or less hard on the eyes, helps to increase the strain, 5 hours work too long; one stretch of 5 hours easier than two stretches of 4 hours; two stretches of 3 hours easier, as there is longer time to recuperate. Eye, ear and throat are all strained in this work, and the brain interpreting the operation of the three would use up energy, sitting in one position objectionable, putting up plugs physical exertion, increases the strain. Eight hours with an interval too hard, sooner have 5 hours' work, and it over with.

Dr. William Britton, practicing 31 years, Toronto, representative of the University of Toronto and Medical Council, attended employees. Many suffering from nervous debility occasioned by the strain of that particular work, so far as he could determine, upon the nervous system, which includes the senses of hearing, speaking, seeing and using arms causing too much strain upon the nerve center, the brain; 5 hours continuous work at the extreme limit of speed with headgear on, sitting in a chair would have a deleterious effect upon the constitution and nervous system. Not only are the special senses active but there is the closest of attention apparently which can't be kept up for any length of time without affecting the nervous system to some degree. Not a wholesome employment no matter what length of hours—5 hours under the conditions stated is a great deal too much, where there is delay in giving necessary relief, exceedingly dangerous. A large number of the operators as seen by me at work looked as though they should have been at home resting; their faces showed indications of weakness on account of the strenuous employment—in their own interest as well as future posterity—5-hour system, low pressure well within capabilities of operator would be reasonable. * * * The period of work should be divided with a rest. Finding holes greater strain on eyes than lights although lights a constant strain upon the eyes.

* * * The frequent buzzing in the ear and flashing of lights would be injurious to the nerve center and also if subscriber found fault with operator. Vocal organs not affected as much as the auditory or optic nerves although it would help to tire the whole system. Reaching for the high numbers would injuriously affect the nervous system. From noticing a good many cases that came before me, I have been led to the conclusion that the service is exacting; in a number of cases of young ladies whom I had known as the physician of the family, before they entered into the telephone service and were apparently healthy, after a length of service in the telephone office, I had to prescribe for them for various types of nervous debility, and my advice to the majority of them was to discontinue the work. The constant listening and keen buzzing mean a state of tension of the nervous system all the time; 15 minutes' relief would be a very slight one. * * * Have quite often seen nervous hysteria from this nervous strain to the telephone girls. Above all the uninterrupted close vision which has been called strenuous, and worry can not be dissociated from their work—so very closely watched.

Dr. Alexander Davidson—practicing 25 years. Five hours continuous quick operation most strenuous upon the constitution, sufficient to injure it and the nervous system. Would never advise anyone to go into this occupation if they could earn their living by any other means equally respectable. Average calls about 360 an

hour. With the experience I have had with patients who have consulted me, and with what I saw yesterday of the activity with which they work, and the conditions under which they were acting, I should think that 2 or 3 years would have a very serious effect upon many of the individuals whose faces I saw there yesterday. Those I treated were suffering from the wearing down of the nervous system. * * * Flashing of lights and making connections with the dazzle of the switchboard holes very trying on the optic nerve. Continuous calling of the subscriber and supervisor, a great strain on the auditory nerves. Vocal chords as used not very heavy. All contribute to the debilitating of the nervous system, as also the physical strain in reaching and sitting continuously in one position. Twenty minutes' relief in the 4 hours slight, not long enough to give recuperation. Don't think of any other kind of employment open to women which, for the same period of time, is as exhausting. All the several activities at work at the same time have a very trying effect on the nervous system.

Dr. Charles Sheard, 14 years medical health officer for the city of Toronto, chairman of the Provincial Board of Health. The condition under which the telephone girls operate, the speed required of them, the supervisors hurrying up the girls who are compelled to sit for 5 hours and not allowed to stand, but compelled to sit up straight, make it a most extremely severe service. Girls having received shocks would add the increment of fear to others. Five hours continuous work at high pressure far too long, and in a short time would simply rack and ruin and destroy the nervous system and constitution of the operator. All high pressure in the telephone system. * * * Twenty minutes is a very trifling rest, although of some use. Know of no other occupation which constitutes as great a nervous strain as this. Have given some consideration to this matter since the trouble arose.

Dr. Walter McKeown, 16 years practice in Toronto. Have had telephone operators as patients suffering from nervous exhaustion. Five hours extreme limit for such service with a break in it of an hour. In 8-hour system, the 20 minutes relief would not add very much to the rest, although better than 8 hours with only 1 hour relief. It is the most exacting service I can conceive of, and would have the effect that these girls burn up more energy than they produce, and the time will come when they will have a period of nerve exhaustion resulting from the use, at such high pressure, of the eye, ear, mouth and the arms and the body, and the reaching and stretching and the additional fact that they have got to think constantly. It is not automatic. The only occupation like it is that of railway mail clerks, who only work each alternate day. The worst condition there is their sitting so close together that they must inhale each other's breath. I think operators can't stand more than 3 years of life of such service on an average. I have given the question considerable consideration, and for that reason I know of nothing where the nervous strain is as great. You have to use the eye and the brain constantly, and then you have a physical exertion, and taking it altogether, I know of no other occupation that requires that at such high pressure, and when fear is added it would magnify the difficulty. They were going as fast as they could possibly work.

Dr. James Forfar, practicing 17 years, Toronto. Treated telephone girls for nervous strain and run-down constitution; rather depleted condition. One I remember had a sore on her ear and nervous troubles connected with it; couldn't wear the headgear. * * * The switchboard was $3\frac{1}{2}$ feet high by my rule; operator would have to reach up to her limit, eight sections of 9-inch scale—72 inches one way. The work is injurious to the eyesight in several ways. The flashing of the lights and finding the little holes and plugging in, I think, would be injurious; produces headache constantly looking at the holes and prevents rest, so much so that they can not sleep when they go home; calling out in their sleep No. so-and-so, showing the nervous strain, and others have told me that they couldn't eat well, a common thing for a nervous person. Take the ears; there is that constant cracking sound in the ear by a careless subscriber or somebody calling up a number and snapping these poor girls there from morning till night, and even calling them names that they should not hear, and even swearing at them, and listening to language not fit for any lady to hear. They are compelled to listen to these things. Reaching is hard and injurious to them; to be sitting all the time in one position; not being able to get up, and not being able to be relieved when asked for.

Dr. Jas. M. Anderson, practicing 20 years, Toronto, specialist in eye, ear, nose, and throat. Treated a number of telephone girls, mostly for eye troubles, headache, and nervous troubles. Business of a telephone operator is the most trying of any I have ever seen, so far as it affects the eyes and through the eyes the general system. Three hours twice a day full safe limit of service, with two hours', at least, rest between the two periods. Work broken up by intermission during the eight hours better than 5 hours straight, and less injurious; if only one hour intermission between the two periods of four hours more injurious than five hours straight. The 20 minutes' relief in the two periods of four hours a great deal better than the eight hours with

one hour, but not of much service and not much difference from the five hours straight, although somewhat better. The periods not long enough for rest; five hours divided into two periods with an hour for lunch better than any of the other propositions, and an operator might do that, but the others would be too great a strain upon her. After a service of three or four years would expect to find an exhausted womanhood and unfit for any strenuous work and harmful upon the future motherhood.

Dr. William H. Alexander, practicing 11 years, Toronto. Treated quite a few patients who worked in the telephone company for throat, chest, nervous troubles and headaches, resulting from too long continued nervous strain and not being allowed to obey the calls of nature when necessary. Five hours too long without a rest between. Operating for two or three years in this way would result in a very much disturbed condition, and if persisted in would lead to a nervous prostration and nervous breakdown. Average girl should not remain longer than three years at it, and then would not be in a condition to perform the ordinary occupations of womanhood satisfactorily. * * * Twenty minutes' rest in the eight-hour plan makes no substantial difference, as it wouldn't be a complete letting alone. Don't know of any other occupation which is open to women that necessitates as great a nervous strain upon the nervous system as this telephone operating. Nervous system particularly sensitive to strain at the ages at which the operators are generally employed, somewhere between 17 and 25, and adverse effects are likely to make themselves known after the end of a year or two or three years, and partly later in life.

Dr. Gideon Silverthorn, practicing 15 years, Toronto. Treated patients who were operators for the telephone company. Four cases of electric shocks in summer or autumn of 1906; operators on long-distance. * * * I think typewriting would be perhaps as great a strain on the nervous system.

This witness refused to give any expert testimony, as he claimed he had not been retained as an expert and not paid fees as an expert. He had attended all the above cases at the request of the telephone company and had been paid by the company for such services.

Dr. John F. Uren. Attended telephone girls for fainting caused by heat and exhaustion, have record of 4 times some years ago, paid by the company. Service is very exacting, 5 hours quite exhausting and injurious. Eight hours' service with one hour of rest would be harder. Would prefer the 5 hours straight to the 8 hours with two 20 minutes' relief and the one hour for lunch. Five hours divided into two periods of 2½ hours with one hour intermission much more preferable to the straight 5 hours and quite enough to be exacted from an operator. The effect upon the nervous system is through the eyes and ears and operating generally. Would prefer lesser load for the 7 hours and 20 minutes work than 5 hours with high pressure.

Dr. G. Herbert Burnham, practicing twenty years, Toronto, Member of the Faculty of Toronto University, filling Chair of Ear and Eye. Telephone work is an arduous calling and requires the nervous system to be kept on the constant stretch, and therefore the hours should not be long without a decided intermission. Term of five hours spoken of without intermission is too long. With an intermission of an hour or so is a decided improvement and would not be too onerous. The eight hours with the two 20-minute reliefs and one hour for lunch I would consider a very unsatisfactory arrangement if I were an operator. The work is a strain upon the nervous system as a whole, through the eye and through the ear they are both employed at the same time actively; looking in a number of different directions rapidly in succession is one factor in regard to the strain, and the other factor is that they know they must be continuously on the alert. Must answer questions at once. No hesitation at all. They are unable to relax, sitting 5 hours at a stretch is too long. The utmost stretching of their arms is a little too great, it is not so much mental exertion as it is mental worry by reason of the alertness they have to keep their nervous system in.

Dr. Charles Trow, practicing in Toronto 17 or 18 years, Professor of Ophthalmology and Otology, Eye and Ear work in the Faculty of Medicine, Toronto University. The service is very onerous and a continued strain with whatever relief they have given them in reduction of load. A woman's nature is peculiarly sensitive to reproaches and to words at any time, and that would intensify the nervousness of their calling. Young girls should not work as long as if they were older, as their nervous system is more susceptible to strain and an injury to the nervous system at their particular age is apt to prove more injurious than a similar injury at a later stage. The fact that there is a muscular exertion required in connection with their work and that the eye and ear play their part acting in a concerted way to the degree in which they do, would have an effect upon the nervous system.

Dr. William B. Thistle, practicing 18 years, Toronto, Associate Professor of Clinical Medicine, Toronto University. Can't think of any other occupation open to women in which there is the same strain upon the nervous system as there is in that of telephone operating, for the same period of time.

Dr. Charles R. Clark, Medical Superintendent of the Toronto Asylum, formerly Superintendent of the Kingston Asylum, graduate of Toronto University, 1878. Five hours a day would be a pretty severe day—a full day, to be divided into two with a good period of rest of an hour. The 8 hours, and 7 hours and 20 minutes, no relief from the 5 hours straight. Five hours straight would be a strain on the nervous system. Work not automatic, only to a limited extent. It requires a mental effort every time. Nervous strain is intense and would react on the physical health in a marked way after 3 years' service, and might pass on to the next generation in a more striking way than even in the present generation. I am basing that statement on my everyday experience with just such cases, having an experience on that kind of thing for several years.

'Q. You think it would be passed on the future generation?

'A. That is what I preach all the time.

'Q. Then that being the case, do you believe that it is in the interests of the State that it should be prevented, if possible?

'A. It should be regulated and carefully overlooked.

'Q. And the over-straining prevented?

'A. Yes.

'Q. Then in your mind that is the duty of the State?

'A. I think so.'

Dr. J. M. McCallum, practicing in Toronto since 1886, professor of therapeutics and teacher in connection with diseases of the eye and ear in Toronto University.

Have treated some of the telephone operators suffering from their eyes, caused by strain. Five hours is certainly close to the maximum. I would prefer it divided in two equal periods, with a period of rest in between, say an hour or an hour and a half. An operator has to be there all the time, whether answering calls or waiting for calls, 5 hours continuous service better than the 8 hours or 7 hours and 20 minutes. Result of work would be nerve-fagged and might be a nervous break-down if 5 hours continued for two or three years. The optic nerve and the nerve governing the ocular muscles are elements necessary to be considered, also the lights. We know practically that changes in illumination from dark to light do irritate the optic nerve, and that is going on there all the time. Another thing that struck me was, I said to myself, was it automatic, but I did not think by watching that it was. I did not think they could tell where that light was without really looking at it closely.

'Q. Those lights are liable to flash anywhere along the board?

'A. Yes.

'Q. And of course they would have to make thoroughly sure of the number, they would have to look at the board, I would imagine?

'A. The thing that struck me about it was in that very time whether it was automatic or not. I watched the girls there, and I saw the girls deliberately run their hands along and count the numbers, I asked how long these girls had been there and they told me two years and two years and a half; then I came to the conclusion if a girl who had been there for three years had to search for it that way, it could not be automatic, and there was that strain upon the optic nerve and the muscles of the eyes to get at those accurately; I saw difficulty in fitting the plug in, they seemed to scrutinize it closely to get that.'

Flashing in of the light has an irritating effect and in that way injurious. The nerves governing the extra ocular muscles which focus the eye upon the object looked upon are the nerves where the greatest part of the strain comes. The sound kept up for hours must have an effect on the auditory nerves and if for long hours, an injurious effect might cause deafness. The possibility of receiving shocks would add to the nervous strain, effect on vocal organs not much. Their sitting position is cramped and for that reason the time should be shortened. Reaching added to the physical fatigue. The effect upon the nervous system is through the nerves of the eye and the auditory nerves; the reaching is subsidiary, operating together causes the difficulty. * * * There is no other occupation that I have seen, in which women may be engaged, that occasions quite the same strain to the nervous system as this of telephone operating.

Dr. Robert Dwyer, practicing in Toronto since 1891, for 7 years superintendent of St. Michael's Hospital, now visiting physician, associate professor of clinical medicine in Toronto University. I find the service intense all the time. Five hours continuous service for 2 or 3 years would somewhat injure the nervous system of the average operator, the more so, if say, 17, 18, or 19 years of age. If load made so that operator could be working continuously within her ability, it would be better for her than if she was at times waiting, expecting calls—this thing has very far-reaching effects—the telephone company nor the doctors who see the operators do not see the final result; after these girls have gone on for 4 or 5 years and served the company, and they get married or for other purposes leave, then they turn out badly in their

future domestic relations. They break down nervously and have nervous children, and it is a loss to the community.

'Q. Do you think it would be the duty of the State to legislate in matters of this kind?

'A. Very decidedly, that is our experience in the hospitals, especially in the study of nervous diseases, and it is becoming a serious problem. It is this sort of thing that is laying the foundations of the asylums, and it is dealing with the question now that will prevent the building of asylums and the loss of people to the community.

* * * * *

'Q. Is that a matter of theory or is it based upon facts and conditions as you have seen them?

'A. Facts, as I have seen, not alone here, but in my experience—seen very much of too.

'Q. Do you think you have seen enough of the facts to express the opinion confidently which you have given this morning?

'A. I do.'

Dr. John Noble, practicing 17 years in Toronto. A telephone operator's work is more strenuous than a school-teacher's, I think it is as strenuous as an examiner of papers at an examination. I think it is as strenuous as a shorthand reporter. * * * School-teachers usually work from 4½ to 5 hours a day, with Saturday and Sunday off; 2 months' vacation in summer, and 2 weeks at Christmas; no night work, and regular hours. * * * I think that after 5 years' continuous work in the telephone office, with the hours and under the conditions that are existing there, that she would be disqualified to become a wife and mother. * * * If we are to pile so much work on young women it will exhibit itself in the future generation, and I believe that is the reason of such a marked increase in insanity and such a marked increase in nervous prostration all over the country.

'Q. What would be the effect on the future generation?

'A. They will have epilepsy and all sorts of nervous diseases.'

Drs. Alton Garratt and Campbell Meyers had been employed by the telephone company, and attended the sittings of the commission listening to the evidence adduced, were called on behalf of the telephone company and gave evidence.

Dr. Alton Garratt, practicing in Toronto 18 years, on the general hospital staff and faculty of Toronto University. The 7 hours and 20 minutes actual work, being 4 hours in the morning with 20 minutes' intermission in the middle, then 1 hour for lunch and 4 hours in the afternoon with intermission of 20 minutes in the middle, better than 5 hours straight. Five hours straight rather high pressure work, and would wear on the average nervous system. Everyone has a breaking point; the endurance of anyone will break at some time or other, and I think very few can endure strenuous work for 5 hours, either men or women, and they will do more work and better work and work longer hours and accomplish more by intervals of rest. Five hours divided into two periods of 2½ hours and an intermission of 1 hour between still better, but not a full complement of work. Could not state quantity of work an operator could do without any strain at all, nor the proper number of hours without knowing more about it. Duty of State as far as possible to ameliorate the conditions of those working and to regulate the hours of service and to see that they are remunerated sufficiently well to furnish themselves with sufficient food, etc. I don't know what is a load, how many calls per hour is a load. Five hours straight too long for a great many operators no matter what the load; there is a high tension on the special senses; the fact that these special senses are called into operation so much in combination and that the muscular activity which has been spoken of. This alertness of the faculties catching sounds and such like would have an effect in intensifying the nervous strain.

Dr. Campbell Meyers, practicing 15 years, Toronto. Neurologist in St. Michael's Hospital and charge of nervous department in General Hospital. Specialist in nervous diseases, and private hospital in Deer Park for nervous diseases only. Five hours continuous work at high pressure harder than for 7 hours and 20 minutes with intervals, as operators can not work for any continuous time at this pressure; deleterious to their health. The work certainly induces nervous strain. Five hours divided into two periods with an interval better than the 7 hours and 20 minutes, provided both periods kept at a moderate or low pressure. * * * Object to high pressure for any continuous period—there is a strain even when operator is sitting waiting for calls.

Upon this subject of the result of a continuous heavy "load" for a long period, the conclusions of the Royal Commission of Canada

become especially important because the conditions they had to consider were those of excessive loads on a five-hour shift. The conclusions of the commission were in part as follows:^(a)

It remains, finally, to consider a feature subjective or personal in kind, and which is at once the distinguishing and most important element in the work of telephone operating, namely, the extent to which the special senses are called into play and the manner in which they are required to act, not only continuously, but concertedly. This feature calls for special consideration in estimating the strain to which telephone operators are subjected from the nature of their work.

As has been pointed out, connections on a switchboard are made by inserting a small plug in a small hole above which the number of the telephone requested appears. The eye is attracted in the first instance by the glowing of a light which announces the call. It has then to immediately find upon the switchboard the hole in which it is necessary to insert the plug to make the desired connection. Similarly, in disconnecting, the eye detects the extinction of the light, and then seeks on the switchboard the number with which the connection has been made. This means constant employment of the muscles of the eye in different directions, and use of the optic nerve. The ear, in receiving calls, is required to distinguish between a multitude of different voices, to ascertain at once, and so as to avoid repetition, the number asked for, no matter how indistinctly or ill-pronounced the number may be; this necessitates constant alertness of the auditory nerve, whilst the vocal organs are scarcely less constantly in use in the answering of calls, the repetition of numbers, and the conducting of such conversations as may be necessary. The sensations created by the working of the several senses in this manner, transmit their several messages to the brain, which, in turn, directs and governs the actions they suggest. The brain is the center of the nervous system. A mere statement of the case is sufficient to show that viewed from this point the rapidity or speed with which operators are called upon to carry on their work becomes a matter of great concern, regard being had to the mental constitution and nervous system. It is the fact that the special senses are called into operation so much in combination, that the several activities are all at work at the same time, which, perhaps, more than anything else, distinguishes telephone operating from that of any other employment in which women are engaged. It introduces for consideration elements of the first importance from the psychological and physiological standpoints. In most occupations in which women are employed it is the physical energies which are primarily taxed in the labor expended. This is the case with most of the work done in factories. It is so, too, with employment in shops and stores. No other calling has suggested itself to the commission in which the senses of hearing, speech and sight appear to be called into play simultaneously to the same extent or required to be so constantly on the alert. Even in typewriting and telegraphing, to which occupations references were made in this connection before the commission, there is a difference. In taking down

^a Report of the Royal Commission on a Dispute Respecting Hours of Employment between the Bell Telephone Company of Canada (Limited), and Operators at Toronto, Ontario, 1907, pp. 60, 61.

shorthand a stenographer is required to use the senses of hearing and sight, but not that of speech. In transcribing shorthand notes upon a typewriter, neither hearing nor speech are called into play, but merely the sense of sight. Similarly in telegraphing, a telegrapher in transmitting a message is not required to use his sense of speech, and may even transmit without using his sense of hearing, and in receiving a message does so without using his vocal organs. It is this peculiarity of the work of telephone operating, resulting from a combination of a new power with a series of new inventions which, as has been said, distinguishes this class of work from other occupations with which it might otherwise be compared, and which must be given a first consideration in considering the question of hours and the suitability of women for this class of employment. A fair comparison can not be drawn in respect to the intensity of employment between this work and other classes of work in which the strain is mainly physical, inasmuch as telephone operating differs from most other female employments not so much in degree as it does in kind, and the exhaustion which it entails is not so much physical as mental and nervous, and exhaustion of nervous energy, a depletion of nervous force.

Little study has been made of telephone work from the point of view of the peculiar physical effects caused by the occupation itself. The report of the Royal Commission of Canada is perhaps the fullest study so far made on the subject. There are also some valuable contributions to be found in German and French medical literature.^a But on the whole, this is as yet an untouched field.

PRESENTS AND PREFERENTIAL CALLS.

While the relation between the two subjects of the above title is not now so direct as it was in former years, there is perhaps sufficient connection to warrant their treatment in one section.

Up to within a few years, presents from a subscriber to the operator handling his calls was a very common rule, especially at Christmas time. These presents were often very considerable in amount. Sometimes cash presents of as much as \$50 were received from banks and other large users of the telephone. The practice became such a source of abuse in the matter of the order of calls, and such a nuisance to the companies, that nearly all companies have made rules more or less stringent against the receiving of presents by operators, beyond mere trifles—such as flowers or candy at Christmas time—which subscribers may still send as recogni-

^a In a recent work on Occupational Diseases of the Ear (*Berufskrankheiten des Ohres*, p. 127) Dr. Friedrich Röpke speaks of the spasmodic action of the muscles of the middle ear as a result of telephone work, and quotes a number of other medical treatises on the subject, among them, Lannois: *Das Telephon und die Ohrenkrankung*, 1889; and Gelle: *Actions du telephon sur l'organe de l'oreille* (*Société de Biologie*, June 1, 1889). Both these works speak of the effect of telephone work upon the middle ear and quote cases of "otitis media" to substantiate their theory.

tion or token of appreciation of service. The New England Telephone Company has prohibited gift-taking in Boston exchanges, and probably throughout the system. Other companies permit the operator, for a period of ten days prior to Christmas, to give a subscriber her name if he asks for it; at no other time is she permitted to give her name over the telephone. Other companies again do not permit operators to give their names, but allow them for a period of ten days or two weeks before Christmas to give their numbers to subscribers. Presents sent to the company addressed to these numbers will be delivered by the company unless there is something suspicious about them, as being too large in amount, etc.

In several cities managers do not discourage the giving of presents to operators by subscribers; the cash gifts, however, do not usually exceed \$5. The majority of the companies have considered it the wiser course to prohibit operators from receiving presents.

Admittedly, preference was formerly given to the calls of subscribers who had the reputation of being chronic fault-finders. So universal was this that it was a common practice to cap the signal of a "growler" with a frosted green light, and whenever such a light flashed in front of an operator she was disobeying the rules if she did not attend to that call immediately. As the total number of subscribers increased and the business grew to its present enormous proportions, the companies began to see that no man should be given preference in the order of his calls over another man paying the same amount for the use of his telephone because he was habitually disagreeable or because he gave presents to operators. There are very few exchanges now where habitual impatience insures a man a "preferred-color," and the frosted green light in most places has come to mean something else.

Preferred business as a settled policy has not made much progress in the telephone industry. In only one northern city—New York—was there any tangible evidence found of preferred calls, and this was confined to long-distance business, and was very limited in extent. A "Morse down" call, or signal for using the telephone wire for telegraphing purposes, receives prompt attention, and it was stated that certain companies and firms were given priority in the use of the wires. In some southern cities in the cotton belt cotton commission brokers were given the right of way at certain hours, and it was noticed that the names of the favored firms were the same as those developed in the telegraph investigation.

In some cases brokers had a special operator assigned to their calls when a large number of calls were to be made in a short time. While this expedited their business, there was nothing to indicate that any one having a large number of calls to make regularly would not be given the same treatment or that, because of the special operator,

other subscribers' calls were materially delayed. Another system by which telephoning is rendered more speedy in the cotton districts is that of having a trunk line direct to the toll exchange, so that calls between cities do not have to pass through the local exchanges. At the present time it must in candor be said that preferential calls are not a serious evil in the telephone business.

STRIKES AND TELEPHONE OPERATORS' UNIONS.

Telephone operators' strikes have been remarkably rare and generally of very short duration. During the investigation records of less than a dozen strikes were discovered, and these were over very minor matters, and in no case lasted more than a week.^(a)

Practically no organization exists among operators. Only five local federal unions of telephone operators are affiliated with the American Federation of Labor. None of these are large or are located in a city of considerable size. One or two of these when visited seemed to be more like social clubs than trade unions. In all cases their relations with the local managers were entirely friendly. In the large cities the attitude of the local managers, and of the companies as a whole, is distinctly antagonistic toward labor organizations among operators, in the present condition of the business at least. It was pointed out that with the almost universal fact of short experience for a vast majority of the operators, any organization among them would be likely to be in the control of young girls inexperienced in any kind of industrial affairs and with only three or four months' experience in the telephone business. Managers who were most apprehensive of the danger to be feared from trade unionism among operators insisted that their feelings and opinions were not based upon general objections to trade unionism itself, and that they would not object to unions if in the future the telephone business got to a point where the mass of its operators were women of mature years and had been for a reasonable time in its employ.

CARE FOR HEALTH OF OPERATIVES AND WELFARE WORK.

Few, if any, industries present so much or such widely distributed intelligent care for the health and welfare of their women workers as is found among the telephone companies. While the extent of the provision for health, pleasure, or comfort of female employees varies greatly among the various companies or among the exchanges of the same companies, and while the degree of intelligence displayed in handling this always somewhat delicate problem is as variant as its extent,

^a The strike in Des Moines and connected towns in Iowa, not being within the territory investigated, is not included in the above.

yet in practically every exchange visited some sort of a beginning has been made toward developing the best possible conditions of the work.

Ventilation of operating rooms, which is an especially difficult and serious problem in a telephone exchange, has received special attention from the more progressive managers, though in the worst exchanges, where it is most needed, it has, from the very hopelessness of the case, been ignored. The ventilation of a large telephone exchange is difficult primarily from the fact that the switchboards are placed against the wall usually on three sides of the room and in front of windows, thus shutting off more or less the sources of both ventilation and light. The question is most serious because the girls must sit so close together and breathe against a flat surface not over 18 inches from their faces, which prevents a normal dispersion of the breath as expelled from the lungs throughout the surrounding air. These conditions make an upward suction of air the only adequate method of ventilation—that is, there must be currents of air from below upward sufficiently strong to completely change the air in front of the switchboards rapidly and yet not create a noticeable draught on the bare heads of the switchboard operators. Perhaps the first step toward ventilation of telephone exchanges, as possibly all other workshops, is to ignore windows entirely as a prime source or means of ventilation.

A noteworthy instance of the results of improved methods of ventilation adopted by a telephone company is that of the Cambridge exchange in Boston, operated by the New England Telephone and Telegraph Company. The room contains 30,000 cubic feet of air space, and here are employed from 50 to 60 women and girls. The subjoined description of this experiment and its results is from the pen of Prof. C. E. A. Winslow, of the Massachusetts Institute of Technology, at whose suggestion it was made:^(a)

The operating room of the New England Telephone and Telegraph Company at Cambridge, Mass., is a long room, extending from front to back of a business block. It is 71 feet long and 34½ feet wide, with a jog 3½ feet wide taken out of the rear 32 feet on one side. The room is 13 feet high and has a capacity of 30,000 cubic feet.

Fifty or sixty women are employed in this room as operators, seven-eighths of them being on the day shift. During the warmer months of the year no difficulty has ever been experienced in ventilating the room, by means of large windows at each end, and by the use of electric fans. In the winter time, however, it was impossible to secure adequate natural ventilation without undue exposure to drafts.

In the spring of 1907 a simple but efficient system of artificial ventilation was installed. A galvanized-iron duct was constructed, opening to the air, over the front door of the operating room, and running along the ceiling through the center of the room for a distance of forty-three feet. The duct was two feet wide by one foot

^a Report of Sixth International Congress on Tuberculosis. Article on "The cash value of factory ventilation," by C. E. A. Winslow, pp. 185-189.

deep, and was perforated along each side by one hundred and fifty inch and a quarter holes. Two sixteen-inch electric fans were placed in the wall at the back of the room to discharge the vitiated air, forming, with the inlet duct, a vacuum system of ventilation.

A marked improvement in the comfort and general condition of the operators followed this change; and the betterment was sufficiently marked to show itself in a notably greater regularity of work. The statistics of attendance for two years prior to the change, and for sixteen months subsequent to it, are given in the table below. They have been compiled from the records of the chief operator, who has been in charge of the room during the entire period. The average number of daily absences, in the first of the three columns for each year, were calculated from the actual records of all unexplained minor absences; long illnesses, vacations, etc., being omitted. The absences which remain are, of course, due to many causes; but mainly to slight illnesses of various sorts.

RECORD OF ATTENDANCE—CAMBRIDGE OPERATING ROOM.

UNVENTILATED.

Month.	1905-6.			1906-7.		
	Average daily absences.	Force.	Per cent of absence.	Average daily absences.	Force.	Per cent of absence.
April.....	0.9	50	1.8	1.2	56	2.1
May.....	.6	50	1.3	1.9	56	3.3
June.....	1.4	51	2.6	2.0	56	3.6
July.....	1.5	54	2.8	1.9	56	3.3
August.....	2.0	54	3.6	1.7	56	3.0
September.....	2.6	54	4.9	1.3	56	2.4
October.....	1.1	54	2.0	2.0	56	3.6
November.....	2.1	54	4.0	1.3	56	2.4
December.....	1.6	54	2.9	1.7	56	3.3
January.....	2.6	54	4.9	2.9	56	5.2
February.....	3.0	54	5.6	2.8	55	5.0
March.....	2.2	54	4.1	2.0	58	3.4

VENTILATED.

Month.	1907-8.			1908.		
	Average daily absences.	Force.	Per cent of absence.	Average daily absences.	Force.	Per cent of absence.
April.....	2.0	58	3.5	1.6	67	2.4
May.....	1.8	58	3.1	1.2	67	1.8
June.....	1.7	58	2.9	1.2	67	1.7
July.....	2.0	58	3.4	1.0	65	1.6
August.....	2.3	58	3.9	.....	.....	.....
September.....	2.4	58	4.1	.....	.....	.....
October.....	1.9	63	3.0	.....	.....	.....
November.....	1.2	63	2.0	.....	.....	.....
December.....	1.2	63	1.8	.....	.....	.....
January.....	1.2	66	1.8	.....	.....	.....
February.....	1.6	65	2.4	.....	.....	.....
March.....	1.0	65	1.5	.....	.....	.....

In each year absences diminish in spring and fall, and show an increase in winter and summer. At the extreme seasons of the year heat and cold, respectively, undermine vital resistance, produce minor illnesses, and accentuate any constitutional weakness. In

summer the troubles which arise are largely digestive ones, while in winter colds and pulmonary affections are most common, and the general seasonal curve of disease is familiar to all students of vital statistics.

The change in ventilation did not affect the attendance in the operating room during the summer of 1907. No direct effect could be expected at this season, since in warm weather, with windows open, natural ventilation of the room could scarcely be improved upon. During the winter of 1907-8, however, a marked improvement was manifest, as indicated by the table. For the first three months of 1906 the average percentages of operators absent were 4.9, 5.6, and 4.1, respectively; for 1907 the figures were 5.2, 5.0, and 3.4; for 1908 they dropped to 1.8, 2.4, and 1.5. Comparing the three winter months only (January to March), it appears that 4.9 per cent of the force were absent in 1906, 4.5 per cent in 1907, and only 1.9 per cent in 1908. This means a net saving for the three months of 2.8 per cent of the force employed, corresponding to one and eight-tenths the entire time of one operator.

The original cost of installing the system of ventilation was in the neighborhood of \$75. The saving in operators' time during the three winter months amounted to twenty-three working weeks, as indicated above (13 weeks \times 1.8). Since the average pay of an operator is \$8.50, this meant a saving of \$195 to the employees in wages, and the increased efficiency due to regularity of attendance paid good interest to the company.

Another suggestive point is the continuance of good attendance through June and July of 1908. Both were exceptionally hot months this year, and, judging by the three earlier years, the summer increase in absences should have begun to manifest itself. As pointed out above, the ventilating system has no direct effect in hot weather, when all the windows can be kept open. It may well be, however, that vital resistance has been built up by a year of breathing good air, so that the operators are better able to stand the general strain of hot weather conditions.

While thorough medical examination of all applicants by a medical expert has not been inaugurated by all companies, it has by some, and all seek to exclude from employment, by some sort of an examination, all persons who are afflicted with tuberculosis of the lungs or any disease which makes their presence likely to injuriously affect other employees. Much, however, remains to be done in this direction.

Disinfection of the instruments the operators use upon their heads is a precaution against the spread of infectious diseases that is carefully attended to by 25 out of 39 Bell companies, 3 out of 4 Independent companies, and all of the American Telephone and Telegraph or long-distance companies or exchanges reporting.

Rest rooms for operators taken suddenly ill are almost universal, and while not always adequate in size or furnishings are being gradually improved as they become a recognized part or fixture of an exchange.

Twelve out of the 39 Bell companies reporting employ medical inspectors at exchanges, though none report regular and periodical medical examination of operators subsequent to employment. Several companies take the precaution of not employing as beginners—that is, very young women or girls—those who do not live at home; the great majority of companies, however, have no rule covering this matter. In only one case does the franchise ordinance of a telephone company contain regulations concerning the protection of health and safety of women employees. Sick leave is granted with pay, under certain restrictions and regulations, by six of the Bell companies, and in special cases by all of the American Telephone and Telegraph exchanges reporting, though none report a general regulation on the subject.

Lunches are furnished by six Bell companies, not including one furnishing lunch to all employees working two hours or more overtime, one furnishing lunch to chief operators and clerks when they work overtime, and 13 furnishing hot beverages only. Seven out of nine American Telephone and Telegraph exchanges reporting furnish hot beverages free at lunch time, employees bringing or furnishing other lunch materials. Two of the four Independent companies furnish lunch or hot beverages at some of their exchanges. Other companies furnish lunches at cost or less, submitting each day a fairly extended menu from which each girl may select such dishes as she likes. The telephone companies that have experimented most extensively with free and hygienic lunches for operators find that they pay in the comparative absence of afternoon headaches and “dullness” that so generally follows the eating of ill-chosen or badly cooked lunches by those whose work requires a constant sitting position. These afternoon periods of “dullness” and headache prove disastrous to the efficiency of service rendered to the public as the afternoon “load” climbs to its “peak.”

Practically all the companies, except the American Telephone and Telegraph, where it is not practicable in most cases, permit operators to select the exchange in which they shall work, and make every reasonable effort to get girls into the exchange near or nearest their homes. Choice of “tricks,” or operating shifts, is quite usually granted each operator by the company’s rules, and is often granted in absence of rules.

Relief periods of 15 minutes are granted, one in the forenoon and one in the afternoon, and while in a few exchanges there is a tendency to restrict and curtail these periods and to treat them as a privilege to be asked for and given only on request, the custom of granting relief periods is likely to fasten itself permanently on the industry, and they will become, without doubt, a recognized right and necessity of the occupation rather than a favor.

In many places, but more notably in New York and Chicago, elaborate systems of welfare work have been inaugurated. This covers not only library conveniences, but parlor games for the rest rooms, occasional boat-ride excursions, theater and art-museum parties under a competent teacher-escort, etc.

Roof-garden resting places form a new and inexpensive experiment, and have been found to be most beneficial to employees.

It should be noted also that, taken as a whole, the loyalty of the women employed, and of operators especially, to those immediately over them, and to the employing companies was of the highest type. To this the companies and the public owe much of the standard of efficiency maintained in the service rendered the public. Physical or mechanical equipment means much, of course, but in no industry does the human element enter more largely into the question of service rendered. The money value to the companies and to the public of the fine spirit of the work that actuates "telephone girls" is beyond reckoning. Its preservation is worth many times the cost of removing the causes of complaints that exist; of putting in elevators where none exist or operating such as exist during the hours the operators must come to and go from their work; of eliminating such unnecessary overtime as exists; the curtailment and unnecessary irregularity of lunch and relief periods; and, above all, the elimination of unsympathetic supervisory control. While theoretically an operator can carry her complaints from supervisor to chief operator and on up to manager, yet in practice there is a frigidity about the official air in many exchanges that makes the operator fear to do this. Low as the wages are in most places, the operators for the most part like their work, and are afraid of losing their positions or chances of promotion if they complain, no matter how reasonable their complaint.

In one or two places this had smoldered for months, until, as one girl put it, "All we need in this town is a leader, and every telephone girl in the city would go on strike." Fortunately this spirit, so common in some industries, is exceedingly rare in telephone exchanges. Strange to say, considering the low wages, it is not economic where it exists; i. e., it is not a demand for more wages, but purely humanistic in its source and nature. Nowhere does the humanization of industry mean so much to the public, the employers, and the employees as in the telephone exchange. The Wisconsin railroad commission, in its report dealing with telephone companies, referred to in another section of this report, says:

Nevertheless, we are so much impressed by the extremely vital significance to the service given to subscribers of the esprit de corps and condition of the operators that we can not forego remarking that the operators should be looked after individually and collectively by some one, preferably, it seems to us, by one of their own sex, who is big enough, sympathetic enough, wise enough, and courageous enough

to take these young women in hand for any and all purposes which affect their health, comfort, and working efficiency. A mature woman, of the type we have in mind, could impress her personality upon every operator from the time she enters the operators' school to the time she takes her place as leader in her office. The employment of a "social secretary" may be another way of meeting the situation. At least it deserves consideration.^(a)

WAGES.

The wages data secured for this report relate to the 39,586 persons whose names were on the pay rolls of the companies reporting, and whose work related to the exchanges or systems from which reports were received.

The Bell telephone companies furnished pay-roll cards covering the wages, hours worked, and earnings of employees in the various companies for a given pay-roll period. The total number of such cards received from the Bell companies, complete enough for tabulation, was 37,886. Upon examining these pay-roll cards preparatory to tabulation, it was found that different companies reported the data on different bases—some reported the wages and earnings on an hourly, some on a weekly, some on a daily, and others on a monthly basis. In order to present them on a basis that would be comparable, it was found necessary to reduce them all to a common basis. As the majority of the companies based wages on a monthly rate, the data on the cards were all computed on a monthly basis. It was found, also, that owing to a deficiency in the method of reporting occupations it was difficult, in many instances, to determine the exact meaning of certain occupation terms, as apparently the same kind of work was reported by different companies under different occupation names. There was also such a great variety of specific occupation terms that it was found advisable to group them. For instance, there were 20 or more different kinds of clerks, and a large number of different kinds of managers, etc. The various kinds of clerks have been tabulated under the one general head "clerks," and all managers under the head of "managers." It was found, further, that there was a number of cards so imperfectly reported that it was impossible to determine the occupation; also there was a number of occupations each reported by a single company and for which but a very few persons were reported. All of these have been put in one class under the head of "miscellaneous."

In addition to the above, pay-roll cards were received for 932 employees in companies other than the Bell, known as independent companies, and 768 from various branches of the American Tele-

^a Lorenz and Lorenz et al. v. Wisconsin Telephone Company, before the railroad commission of Wisconsin. Decision and order of the commission, p. 73.

phone and Telegraph Company. The three sets of pay-roll cards have been tabulated separately and on the same basis.

Of the 39 Bell companies reporting, 5 pay their employees weekly, 29 semimonthly, and 5 monthly; of the exchanges in the 9 cities from which American Telephone and Telegraph Company reports were received, 8 pay monthly and 1 semimonthly; the 4 independent companies reporting, paid semimonthly. The frequency of payment, it will be understood, is not the same thing as the basis of rate of wages, i. e., a company may have a monthly basis for its wage rates and pay its employees twice each month or once a week.

The number of occupations covered by these data reach considerably over a hundred. Some of these occupations are comparatively inconsequential, either from the point of view of numbers involved or importance in the industry. In the general tables the details of wages will be found for practically all of the occupations reported upon. In the following table will be found a summary of these occupations, the total number of employees reported in each occupation for the three systems of companies, and the number and per cent of employees in each occupation and in each wage group; that is, the number and per cent receiving under \$30 per month, \$30 and under \$50, \$50 and under \$80, and \$80 and over.

NUMBER AND PER CENT OF EMPLOYEES IN EACH SPECIFIED OCCUPATION, TELEPHONE COMPANIES, BY CLASSIFIED RATES OF WAGES.

BELL TELEPHONE SYSTEM.

Occupation.	Total employees.	Employees whose monthly rates of wages were—							
		Under \$30.		\$30 and under \$50.		\$50 and under \$80.		\$80 and over.	
		Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.
Accountants.....	16	.....	.....	.....	.....	2	12.5	14	87.5
Adjusters.....	38	.....	.....	.....	.....	24	63.2	14	36.8
Agents.....	371	1	0.3	2	0.5	151	40.7	217	58.5
Assemblers.....	16	1	6.3	6	37.5	9	56.3	.....	.....
Battery men.....	33	.....	.....	5	15.2	22	66.7	6	18.2
Blacksmiths.....	7	.....	.....	.....	.....	5	71.4	2	28.6
Blueprinters.....	6	2	33.3	2	33.3	2	33.3	.....	.....
Bookkeepers.....	316	24	7.6	46	14.6	204	64.6	42	13.3
Bricklayers.....	6	.....	.....	.....	.....	1	16.7	5	83.3
Cabinetmakers.....	1	.....	.....	.....	.....	1	100.0	.....	.....
Cable splicers.....	716	.....	.....	28	3.9	413	57.7	275	38.4
Carpenters.....	52	.....	.....	1	1.9	27	51.9	24	46.2
Cashiers.....	64	1	1.6	6	9.4	23	35.9	34	53.1
Chauffeurs, drivers, hostlers, and stablemen.....	168	.....	.....	32	19.0	112	66.7	24	14.3
Clerks.....	^a 4,552	389	8.6	1,778	39.4	1,662	36.8	682	15.1
Clerks, chief.....	155	.....	.....	16	10.3	44	28.4	95	61.3
Clerks, chief, assistant.....	6	.....	.....	1	16.7	1	16.7	4	66.7
Collectors.....	^b 536	38	8.3	96	20.9	272	59.3	53	11.5
Collectors, chief.....	9	.....	.....	.....	.....	1	11.1	8	88.9
Compositors.....	9	1	11.1	5	55.6	3	33.3	.....	.....
Custodians.....	1	.....	.....	.....	.....	.....	.....	1	100.0
Delivery men.....	64	.....	.....	1	1.6	63	98.4	.....	.....
Draftsmen.....	70	.....	.....	6	8.6	41	58.6	23	32.9
Draftsmen, chief.....	5	.....	.....	.....	.....	1	20.0	4	80.0
Electricians.....	16	.....	.....	2	12.5	11	68.8	3	18.8

^a Including 41, rates of wages not reported.

^b Including 77, rates of wages not reported.

NUMBER AND PER CENT OF EMPLOYEES IN EACH SPECIFIED OCCUPATION, TELEPHONE COMPANIES, BY CLASSIFIED RATES OF WAGES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Occupation.	Total employees.	Employees whose monthly rates of wages were—							
		Under \$30.		\$30 and under \$50.		\$50 and under \$80.		\$80 and over.	
		Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
Elevator conductors.....	23	2	8.7	9	39.1	12	52.2		
Engineers.....	155					44	28.4	111	71.6
Engineers, assistant.....	85					17	20.0	68	80.0
Examiners.....	8					1	12.5	7	87.5
Field men.....	3					2	66.7	1	33.3
Field men, chief.....	1							1	100.0
Foremen.....	615			5	.8	136	22.1	474	77.1
Foremen, assistant.....	39					19	48.7	20	51.3
Foremen, general.....	21					1	4.8	20	95.2
Foremen, general, assistant.....	1							1	100.0
Frame men.....	36			7	19.4	28	77.8	1	2.8
Guard men.....	15			13	86.7	2	13.3		
Inspectors.....	772	2	.3	22	2.8	532	68.9	216	28.0
Inspectors, chief.....	11							11	100.0
Installers.....	1,460	15	1.0	154	10.5	1,068	73.2	223	15.3
Installers, chief.....	2							2	100.0
Instructors.....	54	1	1.9	22	40.7	25	46.3	6	11.1
Instructors, manager.....	1							1	100.0
Investigators, claims department.....	6					1	16.7	5	83.3
Janitors.....	416	141	33.9	119	28.6	154	37.0	2	.5
Janitors, chief.....	1							1	100.0
Laborers.....	808	16	2.0	355	43.9	436	54.0	1	.1
Linemen.....	2,028	6	.3	316	15.6	1,340	66.1	366	18.0
Machinists.....	37	5	13.5	12	32.4	17	45.9	3	8.1
Managers.....	269	5	1.9	9	3.3	109	40.5	146	54.3
Managers, assistant.....	63			5	7.9	16	25.4	42	66.7
Matrons.....	166	49	29.5	102	61.4	12	7.2	3	1.8
Messengers.....	417	367	88.0	50	12.0				
Monitors.....	205	6	2.9	184	89.8	15	7.3		
Operators.....	416,258	6,768	41.6	9,430	58.0	57	.4	2	(b)
Operators, chief.....	586	29	4.9	261	44.5	256	43.7	40	6.8
Operators, chief, assistant.....	141	16	11.3	48	34.0	77	54.6		
Operators, senior.....	232	5	2.2	217	93.5	10	4.3		
Operators, student.....	707	693	98.0	13	1.8	1	.1		
Painters.....	24			4	16.7	13	54.2	7	29.2
Paymasters.....	7					2	28.6	5	71.4
Paymasters, assistant.....	7					2	28.6	5	71.4
Photographers.....	1							1	100.0
Porters.....	5	1	20.0	3	60.0	1	20.0		
Repair men.....	679	1	.1	19	2.8	486	71.6	173	25.5
Roofers.....	4					4	100.0		
Secretaries, assistant.....	3					1	33.3	2	66.7
Servers.....	4	3	75.0	1	25.0				
Solicitors.....	114			2	1.8	92	80.7	20	17.5
Stationers.....	1					1	100.0		
Stenographers.....	441	6	1.4	135	31.1	264	60.8	29	6.7
Stock keepers.....	57			10	17.5	39	68.4	8	14.0
Students.....	4			3	75.0	1	25.0		
Superintendents.....	42					2	4.8	40	95.2
Superintendents, assistant.....	2							2	100.0
Supervisors.....	1,647	32	1.9	813	49.4	783	47.5	19	1.2
Supervisors, building.....	4							4	100.0
Supervisors, chief.....	16			15	93.8	1	6.3		
Surveyors.....	3			2	66.7			1	33.3
Switchboard men.....	361	1	.3	31	8.6	248	68.7	81	22.4
Switchboard men, apprentice.....	67					58	86.6	9	13.4
Switchboard men, helper.....	20			4	20.0	16	80.0		
Switchboard men, junior.....	15					1	6.7	14	93.3
Telegraph operators.....	26	1	3.8	4	15.4	17	65.4	4	15.4
Terminal men.....	11					4	36.4	7	63.6
Testers.....	235	2	.9	28	11.9	146	62.1	59	25.1
Testers, chief.....	21					1	4.8	20	95.2
Tile layers.....	4					4	100.0		
Traffic chiefs.....	53					11	20.8	42	79.2
Traffic chiefs, assistant.....	6					6	100.0		
Treasurers, assistant.....	3							3	100.0
Troublemakers.....	277	1	.4	27	9.7	204	73.6	45	16.2
Troublemakers, junior.....	17					1	5.9	16	94.1

a Including 1, rate of wages not reported.

b Less than one-tenth of 1 per cent.

c Including 7, rates of wages not reported.

NUMBER AND PER CENT OF EMPLOYEES IN EACH SPECIFIED OCCUPATION, TELEPHONE COMPANIES, BY CLASSIFIED RATES OF WAGES—Continued.

BELL TELEPHONE SYSTEM—Concluded.

Occupation.	Total employees.	Employees whose monthly rates of wages were—							
		Under \$30.		\$30 and under \$50.		\$50 and under \$80.		\$80 and over.	
		Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
Waitresses.....	25	2	8.0	23	92.0	.....	.....	.....	.....
Watchmen.....	71	2	2.8	5	7.0	64	90.1	.....	.....
Wire chiefs.....	319	5	1.6	8	2.5	140	43.9	166	52.0
Wire chiefs, assistant.....	25	.....	.....	2	8.0	11	44.0	12	48.0
Wiremen.....	127	.....	.....	3	2.4	109	85.8	15	11.8
Wiremen, apprentice.....	8	.....	.....	.....	.....	5	62.5	3	37.5
Miscellaneous.....	255	11	4.3	44	17.3	149	58.4	51	20.0
Total.....	37,886	8,651	22.9	14,572	38.6	10,370	27.5	4,167	11.0

INDEPENDENT TELEPHONE COMPANIES.

Agents.....	1	.....	.....	.....	.....	.....	.....	1	100.0
Bookkeepers.....	3	.....	.....	.....	.....	3	100.0	.....	.....
Cable splicers.....	6	.....	.....	.....	.....	3	50.0	3	50.0
Carpenters.....	1	.....	.....	.....	.....	1	100.0	.....	.....
Cashiers.....	1	.....	.....	.....	.....	1	100.0	.....	.....
Clerks.....	37	9	24.3	20	54.1	7	18.9	1	2.7
Clerks, chief.....	2	.....	.....	.....	.....	.....	.....	2	100.0
Collectors.....	16	.....	.....	11	68.8	4	25.0	1	6.3
Draftsmen.....	1	.....	.....	.....	.....	1	100.0	.....	.....
Drivers.....	2	.....	.....	.....	.....	2	100.0	.....	.....
Foremen.....	13	.....	.....	.....	.....	2	15.4	11	84.6
Foremen, general.....	1	.....	.....	.....	.....	.....	.....	1	100.0
Inspectors.....	2	.....	.....	.....	.....	2	100.0	.....	.....
Installers.....	7	.....	.....	1	14.3	5	71.4	1	14.3
Instructors.....	1	.....	.....	.....	100.0	.....	.....	.....	.....
Janitors.....	11	.....	.....	10	90.9	1	9.1	.....	.....
Laborers.....	16	.....	.....	15	93.8	1	6.3	.....	.....
Linemen.....	43	.....	.....	11	25.6	32	74.4	.....	.....
Matrons.....	3	1	33.3	2	66.7	.....	.....	.....	.....
Messengers.....	2	4	80.0	1	20.0	.....	.....	.....	.....
Monitors.....	2	1	50.0	1	50.0	.....	.....	.....	.....
Operators.....	568	506	89.1	62	10.9	.....	.....	.....	.....
Operators, chief.....	26	6	23.1	16	61.5	3	11.5	1	3.8
Operators, chief, assistant.....	6	1	16.7	5	83.3	.....	.....	.....	.....
Operators, senior.....	33	1	3.0	32	97.0	.....	.....	.....	.....
Operators, student.....	1	1	100.0	.....	.....	.....	.....	.....	.....
Repair men.....	16	.....	.....	.....	.....	15	93.8	1	6.3
Solicitors.....	3	.....	.....	.....	.....	3	100.0	.....	.....
Stenographers.....	4	.....	.....	2	50.0	2	50.0	.....	.....
Stock keepers.....	2	.....	.....	.....	.....	1	50.0	1	50.0
Superintendents.....	3	.....	.....	.....	.....	.....	.....	3	100.0
Supervisors.....	65	13	20.0	52	80.0	.....	.....	.....	.....
Switchboard men.....	3	.....	.....	1	33.3	1	33.3	1	33.3
Wire chiefs.....	6	.....	.....	.....	.....	5	83.3	1	16.7
Wiremen.....	3	.....	.....	.....	.....	3	100.0	.....	.....
Miscellaneous.....	19	3	15.8	9	47.4	6	31.6	1	5.3
Total.....	932	546	58.6	252	27.0	104	11.2	30	3.2

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

Clerks.....	77	3	3.9	50	64.9	24	31.2	.....	.....
Clerks, chief.....	7	.....	.....	.....	.....	3	42.9	4	57.1
Examiners.....	2	.....	.....	2	100.0	.....	.....	.....	.....
Inspectors.....	10	.....	.....	1	10.0	5	50.0	4	40.0
Instructors.....	5	.....	.....	.....	.....	5	100.0	.....	.....
Matrons.....	7	1	14.3	6	85.7	.....	.....	.....	.....
Messengers.....	11	11	100.0	.....	.....	.....	.....	.....	.....
Monitors.....	2	.....	.....	2	100.0	.....	.....	.....	.....
Operators.....	513	129	25.1	369	71.9	15	2.9	.....	.....
Operators, chief.....	16	.....	.....	4	25.0	8	50.0	4	25.0
Operators, chief, assistant.....	13	.....	.....	.....	.....	9	69.2	4	30.8

a Including 126, rates of wages not reported.

NUMBER AND PER CENT OF EMPLOYEES IN EACH SPECIFIED OCCUPATION, TELEPHONE COMPANIES, BY CLASSIFIED RATES OF WAGES—Concluded.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Concluded.

Occupation.	Total employees.	Employees whose monthly rates of wages were—							
		Under \$30.		\$30 and under \$50.		\$50 and under \$80.		\$80 and over.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Stenographers.....	9	.....	.....	4	44.4	5	55.6	.....	.....
Supervisors.....	79	.....	.....	20	25.3	59	25.0	.....	.....
Telegraph operators.....	4	.....	.....	.....	.....	4	74.7	.....	.....
Traffic chiefs.....	9	.....	.....	.....	.....	2	100.0	7	77.8
Traffic chiefs, assistant.....	4	.....	.....	.....	.....	1	22.2	3	75.0
Total.....	768	144	18.8	458	59.6	140	18.2	26	3.4

In the foregoing table no separation by sex has been made. In most occupations all or practically all are either males or females. For such occupations as were found to be shared in any significant degree by both sexes, an additional table has been prepared, showing the relative number and percentage by wage groups for males and females, as follows:

NUMBER AND PER CENT OF EMPLOYEES OF EACH SEX RECEIVING EACH CLASSIFIED MONTHLY RATE OF WAGES. IN SPECIFIED OCCUPATIONS.

Occupation.	Employees.			Employees whose monthly rates of wages were—											
	Male.	Fe- male.	Total.	Under \$30.						\$30 and under \$50.					
				Number.			Per cent.			Number.			Per cent.		
				M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Bookkeepers...	257	59	316	1	23	24	4.2	95.8	100.0	15	31	46	32.6	67.4	100.0
Clerks.....	a2,651	a1,871	4,552	73	316	389	18.8	81.2	100.0	474	1,304	1,778	26.7	73.3	100.0
Clerks, chief...	118	37	155							1	15	16	6.2	93.8	100.0
Collectors.....	491	45	536	8	30	38	21.1	78.9	100.0	83	13	96	86.5	13.5	100.0
Janitors.....	311	105	416	57	84	141	40.4	59.6	100.0	98	21	119	82.4	17.6	100.0
Messengers.....	380	37	417	330	37	367	89.9	10.1	100.0	50		50	100.0		100.0
Stenographers.	b 57	b 377	441	1	5	6	16.7	83.3	100.0	12	123	135	8.9	91.1	100.0

Occupation.	Employees whose monthly rates of wages were—											
	\$50 and under \$80.						\$80 and over.					
	Number.			Per cent.			Number.			Per cent.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Bookkeepers.....	199	5	204	97.5	2.5	100.0	42	.....	42	100.0	.....	100.0
Clerks.....	1,430	232	1,662	86.0	14.0	100.0	674	9	683	98.7	1.3	100.0
Clerks, chief.....	24	20	44	54.5	45.5	100.0	93	2	95	97.9	2.1	100.0
Collectors.....	270	2	272	99.3	.7	100.0	130	.....	130	100.0	.....	100.0
Janitors.....	154	.....	154	100.0	.....	100.0	2	.....	2	100.0	.....	100.0
Messengers.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	34	230	264	12.9	87.1	100.0	10	19	29	34.5	65.5	100.0

a Not including 30, sex not reported.

b Not including 7, sex not reported.

In this table a distribution is made by sex into classified wage groups for such occupations as contained any very significant number of both sexes. Several such occupations are given.

Of bookkeepers, for instance, pay-roll cards were received for a total of 316, 257 of whom were males and 59 were females. Of the 316, 24 fall within the first wage group, or have a monthly wage rate of less than \$30; of these, 95.8 per cent are females; in the next wage group, or those receiving \$30 and under \$50 per month, there is a total of 46 persons, 32.6 per cent of whom are males and 67.4 per cent females; in the wage group \$50 and under \$80 per month, there are 204 persons, but here 97.5 per cent are males and 2.5 per cent females; while in the group \$80 per month and over, 42 persons are found, all males.

If we take the clerks, we find a total employment of 4,552 persons, but in 30 cases the cards did not show sex, so that 4,522 is the number whose sex can be determined from the returns. Of these, 389 have a rate of less than \$30 a month, and of these, 73, or 18.8 per cent, are males, while 316, or 81.2 per cent, are females; in the next wage group, \$30 and under \$50 a month, 1,778 persons are found, of whom 26.7 per cent are males and 73.3 per cent females; in the next group, \$50 and under \$80 a month, 1,662 persons present a complete reversal of percentages, 86 per cent being males and 14 per cent females; while of the 683 in the \$80 and over class, 98.7 are males and only 1.3 per cent are females.

In stenography the female employees maintain a larger percentage and do not significantly lose on their predominant percentage until the highest wage group, \$80 and over, is reached, when the percentage is 65.5 for females and 34.5 for males, as against very much lower percentages for males in the lower wage groups.

Considering that interest centers practically in the working conditions and wages of switchboard operatives, the wages of these are here discussed in more detail and are subjected to closer analysis.

Rates of wages must not be confused with earnings, no general statement of which is attempted in this report. Monthly earnings and monthly rate of wages would obviously be identical if the operator worked full time and no overtime, that is, full-time earnings correspond to monthly rate. But, for the reason noted above, that the pay-roll cards came in on different bases, some on an hourly, some on a weekly, others on a semimonthly, while the majority were on a monthly rate basis, it became necessary to base the report on rates of wages rather than earnings. The elements of undertime and overtime do not disturb the rates of wages, while they form a prime element in earnings. Take a pay-roll card, for instance, where an operator at the rate of one dollar a day earned four dollars in the pay-roll period of one week. In other words, she lost two days' time and

wages. In reducing this card to a monthly basis no violence is done in stating the monthly equivalent of one dollar a day as the monthly rate. With regard to earnings, however, the case is different. It is manifestly not proper to say that because the time covered by the pay-roll card is to be increased the earnings are to be increased in the same proportion. It is not proper to say that because this operator lost two days in one week she will lose eight days in four weeks or nine days in a month. The same reasoning applies in case of pay-roll cards showing overtime and when exact full time was worked and earnings agreed with rate. The fact that an operator works full time during one pay-roll period is not a guarantee that she will do so for any number of other pay-roll periods.

It became impossible, therefore, to deal with earnings in a detailed way. After all, the rate is what an operator will earn if she works, and when she works, and while she works. When for any reason she does not work, she of course earns nothing, so that rates of wages in an industry, where there is practically no shut-down, lay-off, or slack-work element in the employment of those engaged, becomes fully as satisfactory a gauge of economic conditions as could be secured by a statement of earnings.

In the matter of the number of operators who worked more or less overtime during the pay-roll period definite data can be given. The pay-roll blanks, as furnished by the bureau and filled out and returned to it by the various companies, called for the overtime worked by each employee during the pay-roll period. This information has been separately tabulated for operators whose pay-roll cards showed that they had worked overtime. The following table shows the number of operators, the number of these who worked overtime within the period, regardless of amount of overtime worked, and percentage of overtime workers of the whole:

NUMBER AND PER CENT OF TELEPHONE OPERATORS REPORTING WHO WORKED OVERTIME, FOR SPECIFIED COMPANIES.

	Number of oper- ators.	Number of oper- ators who worked overtime.	Per cent of oper- ators who worked overtime.
BELL TELEPHONE SYSTEM.			
Bell Telephone Co., of Missouri, St. Louis, Mo.	466	60	12.88
Bell Telephone Co., of Pennsylvania, Philadelphia, Pa.	750	152	20.27
Central District and Printing Telegraph Co., Pittsburg, Pa.	578	201	34.78
Central Union Telephone Co., Indianapolis, Ind.	180	22	12.22
Chesapeake and Potomac Telephone Co., Baltimore, Md.	346	39	11.27
Chesapeake and Potomac Telephone Co., Washington, D. C.	285	9	3.16
Chicago Telephone Co., Chicago, Ill.	3,385	937	27.68
Cincinnati and Suburban Bell Telephone Co., Cincinnati, Ohio.	606	257	42.41
Citizens Telephone Co., Covington, Ky.	66	15	22.73
Cleveland Telephone Co., Cleveland, Ohio.	322	284	88.20
Colorado Telephone Co., Denver, Colo.	339	66	19.47
Cumberland Telephone and Telegraph Co., Louisville, Ky.	119	103	86.55
Cumberland Telephone and Telegraph Co., Nashville, Tenn.	175	150	85.71
Cumberland Telephone and Telegraph Co., New Orleans, La.	189	186	98.41

NUMBER AND PER CENT OF TELEPHONE OPERATORS REPORTING WHO WORKED OVERTIME, FOR SPECIFIED COMPANIES—Concluded.

	Number of operators.	Number of operators who worked overtime.	Per cent of operators who worked overtime.
BELL TELEPHONE SYSTEM—concluded.			
Missouri and Kansas Telephone Co., towns under 5,000 population.....	346	111	32.08
Missouri and Kansas Telephone Co., towns 5,000 to 15,000 population.....	212	91	42.92
Missouri and Kansas Telephone Co., towns 15,000 to 25,000 population.....	119	47	39.50
Missouri and Kansas Telephone Co., towns 25,000 and over.....	555	251	45.23
Nebraska Telephone Co., Omaha, Nebr.....	257	234	91.05
New England Telephone and Telegraph Co., Boston, Mass.....	1,625	25	1.54
New York Telephone Co., New York, N. Y.....	2,825	5	0.18
Northwestern Telephone Exchange Co., towns under 5,000 population.....	52	.....	.....
Northwestern Telephone Exchange Co., towns 5,000 to 15,000 population.....	149	.....	.....
Northwestern Telephone Exchange Co., towns 15,000 to 25,000 population.....	24	.....	.....
Northwestern Telephone Exchange Co., towns 25,000 and over.....	325	.....	.....
Pacific Telephone and Telegraph Co., Los Angeles, Cal.....	326	52	15.95
Pacific Telephone and Telegraph Co., Portland, Oreg.....	275	98	35.64
Pacific Telephone and Telegraph Co., San Francisco, Cal.....	509	330	64.83
Pacific Telephone and Telegraph Co., Seattle, Wash.....	267	39	14.61
Rocky Mountain Bell Telephone Co., Salt Lake City, Utah.....	82	14	17.07
Southern Bell Telephone and Telegraph Co., Atlanta, Ga.....	139	107	76.98
Southern Bell Telephone and Telegraph Co., Birmingham, Ala.....	73	10	13.70
Southern Bell Telephone and Telegraph Co., Richmond, Va.....	57	15	26.32
Southwestern Telegraph and Telephone Co., Dallas, Tex.....	235	172	73.19
INDEPENDENT TELEPHONE COMPANIES.			
Home Telephone Co., Kansas City, Mo.....	365	96	26.30
Home Telephone Co., Louisville, Ky.....	125	63	50.40
Maryland Telephone Co., Baltimore, Md.....	78	.....	.....

These data show remarkable variance in the number and per cent of overtime workers found to be necessary in various cities. In New York City, for instance, less than one-fifth of 1 per cent of the operators were reported as working overtime; while in New Orleans 98.41 per cent of operators work more or less overtime. Boston reports but 25 out of 1,625 operators, or 1.54 per cent, as having worked overtime; while Cleveland, Ohio, reports 284 out of 322, or 88.2 per cent, so working.

In San Francisco 330 out of 509 were called upon to work overtime during the pay-roll period, this being 64.83 per cent; while in Omaha 234 out of 257, or over 91 per cent. In Atlanta, Ga., 76.98 per cent, and in Louisville, Ky., 86.55 per cent were so called upon to do or did overtime work; while in Washington only 9 out of 285, or 3.16 per cent, were so called upon. In St. Louis 60 out of 466, or 12.88 per cent; Salt Lake City, a trifle over 17 per cent, and in Seattle 39 out of 267, or 14.61 per cent, worked overtime. In Baltimore the Independent Company reports no overtime workers, while the Bell Company has but 11.27 per cent of such.

The American Telephone and Telegraph Company reports no overtime worked at any of its exchanges.

It would seem from a study of this table that overtime work can be controlled and is controlled in some exchanges and in some localities, and that if the entire elimination of overtime work is possible in some

places, it might, if desirable, be reduced to a minimum in all by the adoption of the methods there employed.

It should be stated that practically in all companies and in all localities the tacit rule among managers is to make the entering wage slightly above the local prevailing entering wage in department and dry goods stores. That is to say, believing that telephone girls are drawn from the same elements in society and have about the same educational qualifications as saleswomen in stores, the telephone companies make it a rule to pay slightly higher wages than these stores, in the hope of getting the pick of the element from which such employees are drawn.

Within the lower-wage groups are found those who have been but a few months in the service, and the percentage of such indicates the per cent, generally speaking, of those designated as "new girls."

When an automatic system of wage increase prevails, this gradually works itself out, provided the expansion of the business or resignations of operators do not operate to keep the ranks of new recruits swelled to a point which perpetuates the disturbance of the "average monthly rate."

The working of the automatic increase scale is made clear by the following schedule of increases obtaining in the Chicago exchanges. The principle is the same wherever an automatic promotion system exists.

AUTOMATIC SCALE OF WAGES PAID BY CHICAGO TELEPHONE COMPANY.

OPERATORS' SCHEDULE.

Period of service.	Day basis: Working 8 hours, paid for 8½ hours.		Short day basis: Working 5 hours, paid for 8 hours.	
	Hourly rate.	Monthly equivalent.	Hourly rate.	Monthly equivalent.
1st to 3d month.	\$0.10	\$21.68	\$0.10	\$20.40
4th to 6th month. ....	.11	23.84	.11	22.44
7th to 9th month. ....	.12	26.01	.12	24.48
10th to 12th month. ....	.13	28.18	.13	26.52
13th to 15th month. ....	.14	30.34	.14	28.56
16th to 18th month. ....	.14	30.34	.14	28.56
19th to 21st month. ....	.15	32.51	.15	30.60
22d to 24th month. ....	.15	32.51	^a .15	30.60
25th to 27th month. ....	.17	36.84	.17	34.68
28th to 30th month. ....	.17	36.84	.17	34.68
31st to 33d month. ....	.18	39.01	.18	36.72
34th to 36th month. ....	.18	39.01	.18	36.72
4th year. ....	.19	41.18	.19	38.76
5th year. ....	.20	43.35	.20	40.80
6th year. ....	.20	43.35	.20	40.80
7th year. ....	.20	43.35	.20	40.80
8th year. ....	.22	47.68	.22	44.88
9th year. ....	.22	47.68	.22	44.88
10th year. ....	.23	49.86	.22	44.88

^a If operator is kept on evening work at her own request, after her 15-cent rate is past, she does not get over 15 cents; if kept on evenings because there is no place on day work, she gets raises as indicated.

AUTOMATIC SCALE OF WAGES PAID BY CHICAGO TELEPHONE COMPANY—Concl'd.

SUPERVISORS' SCHEDULE.

[Day basis: Working 8 hours, paid for 8½ hours. Evening basis: Working 5 hours, paid for 8 hours.]

Period of service.	Hourly rate.	Monthly equivalent.
1st to 3d month.....	\$0.10	\$21.68
4th to 6th month.....	.11	23.84
7th to 9th month.....	.12	26.01
10th to 12th month.....	.13	28.18
13th to 15th month.....	.14	30.34
16th to 18th month.....	.15	32.51
19th to 21st month.....	.16	34.68
22d to 24th month.....	.17	36.84
25th to 27th month.....	.18	39.01
28th to 30th month.....	.19	41.18
31st to 33d month.....	.20	43.35
34th to 36th month.....	.21	45.52
37th to 42d month.....	.22	47.68
43d to 48th month.....	.23	49.86
5th year.....	.24	52.02
6th year.....	.25	54.19
7th year.....	.26	56.36

Some companies provide certain "extras," such as lunches or hot beverage contributions to lunches, as detailed in a previous section. Eight of the Bell companies pay certain car fares as extras. Of these companies one pays "excess car fares," that is, if an operator is not within a 5-cent fare of her exchange, the company pays all over 5 cents each way until the girl can be transferred to an exchange more convenient to her home; one pays extra car fare to split-trick operators; three pay the car fare of split-trick operators; and two pay the car fare of relief operators. In a few individual cases, or with employees of an individual company, these extras might mean a substantial increase, or at least, assistance. Manifestly, however, these uncertain and casual elements must be eliminated from any statistical presentations of rates of wages, and they do not enter into these rates.

The following table shows the total number of switchboard operators as represented by the pay-roll cards received from each company and city named, smaller cities and towns for two of the companies being grouped with towns under 5,000 population, 5,000 and under 15,000, etc. The average monthly rate for each city, or for these groups of towns, is likewise shown by companies. The total shown for all Bell companies is 16,258 operators at an average monthly wage rate of \$30.91. The lowest average for Bell companies is naturally found in one of the groups of towns under 5,000 population, where 346 operators average \$18.21 on a full-time basis; 212 operators in a group of towns 5,000 and under 15,000 population have an average monthly wage rate of \$19.92.

Considering the larger cities in the Bell system, the highest average monthly rate of wages is found in New York City, where 2,825 operators average \$36.96. The Pacific coast cities are seen to carry a relatively high average rate: San Francisco, \$35.84; Los Angeles, \$35.09; Seattle, \$35; Portland, Oreg., \$34.74. The lowest average for a city of considerable size in the Bell system is found in Nashville, Tenn.,

where 175 operators have an average rate of \$22.40. The average rates in Southern cities range rather lower than those found elsewhere. This is the explanation of the low average for independent companies reporting, as most of the returns received were from Southern cities located in a low-wage belt. The 568 wage returns from three independent companies show an average monthly rate of \$24.38, the lowest being for Louisville, \$19.07; the highest for Kansas City, Mo., \$26.

The returns from the American Telephone and Telegraph Company, or long-distance exchanges, show 513 operators with a general average monthly wage rate of \$34.45. Here the lowest average rate is found in Kansas City, Mo., \$30; the highest in New York City, \$38.53.

AVERAGE MONTHLY RATE OF WAGES OF TELEPHONE OPERATORS.

Company.	Number of operators.	Average monthly rate of wages.
BELL TELEPHONE SYSTEM.		
Bell Telephone Co. of Missouri, St. Louis, Mo.	466	\$29.44
Bell Telephone Co. of Pennsylvania, Philadelphia, Pa.	750	29.16
Central District and Printing Telegraph Co., Pittsburg, Pa.	a 578	27.55
Central Union Telephone Co., Indianapolis, Ind.	180	25.04
Chesapeake and Potomac Telephone Co., Baltimore, Md.	346	27.70
Chesapeake and Potomac Telephone Co., Washington, D. C.	285	27.09
Chicago Telephone Co., Chicago, Ill.	3,385	31.69
Cincinnati and Suburban Bell Telephone Co., Cincinnati, Ohio.	606	27.74
Citizens Telephone Co., Covington, Ky.	66	26.61
Cleveland Telephone Co., Cleveland, Ohio.	322	25.59
Colorado Telephone Co., Denver, Colo.	339	33.48
Cumberland Telephone and Telegraph Co., Louisville, Ky.	119	23.31
Cumberland Telephone and Telegraph Co., Nashville, Tenn.	175	22.40
Cumberland Telephone and Telegraph Co., New Orleans, La.	189	24.37
Missouri and Kansas Telephone Co., towns under 5,000	346	18.21
Missouri and Kansas Telephone Co., towns 5,000 and under 15,000	212	19.92
Missouri and Kansas Telephone Co., towns 15,000 and under 25,000	119	22.98
Missouri and Kansas Telephone Co., towns 25,000 and over	555	26.03
Nebraska Telephone Co., Omaha, Nebr.	257	29.52
New England Telephone and Telegraph Co., Boston, Mass.	1,625	33.01
New York Telephone Co., New York, N. Y.	2,825	36.96
Northwestern Telephone Exchange Co., towns under 5,000	52	23.71
Northwestern Telephone Exchange Co., towns 5,000 and under 15,000	149	25.17
Northwestern Telephone Exchange Co., towns 15,000 and under 25,000	24	22.63
Northwestern Telephone Exchange Co., towns 25,000 and over	325	27.99
Pacific Telephone and Telegraph Co., Los Angeles, Cal.	326	35.09
Pacific Telephone and Telegraph Co., Portland, Oreg.	275	34.74
Pacific Telephone and Telegraph Co., San Francisco, Cal.	509	35.84
Pacific Telephone and Telegraph Co., Seattle, Wash.	267	35.00
Rocky Mountain Bell Telephone Co., Salt Lake City, Utah.	82	34.84
Southern Bell Telephone and Telegraph Co., Atlanta, Ga.	139	24.78
Southern Bell Telephone and Telegraph Co., Birmingham, Ala.	73	24.01
Southern Bell Telephone and Telegraph Co., Richmond, Va.	57	25.53
Southwestern Telegraph and Telephone Co., Dallas, Tex.	235	27.32
Total, Bell telephone system	a 16,258	30.91
INDEPENDENT TELEPHONE COMPANIES.		
Maryland Telephone Co., Baltimore, Md.	78	25.27
Kansas City Home Telephone Co., Kansas City, Mo.	365	26.00
Louisville Home Telephone Co., Louisville, Ky.	125	19.07
Total, independent telephone companies	568	24.38
AMERICAN TELEPHONE AND TELEGRAPH COMPANY.		
Boston, Mass.	51	32.79
Chicago, Ill.	103	30.87
Cincinnati, Ohio.	26	31.15
Kansas City, Mo.	7	30.00
Minneapolis, Minn.	13	30.38
New York, N. Y.	187	38.53
Philadelphia, Pa.	73	33.49
Pittsburg, Pa.	33	33.79
St. Louis, Mo.	20	32.00
Total, American Telephone and Telegraph Company	513	34.45

a Not including 1 operator, rate not reported.

In connection with the average monthly rate of wages the following table shows for each company the wage group in which the largest number of operators is employed and the percentage that this number is of total operators:

AVERAGE MONTHLY RATE OF WAGES OF TELEPHONE OPERATORS AND CLASSIFIED WAGE GROUPS IN WHICH THE LARGEST PERCENTAGES OF OPERATORS ARE FOUND.

Company.	Average monthly rate of wages.	Per cent of operators in wage group in which largest number are employed.					
		\$15 and under \$20.	\$20 and under \$25.	\$25 and under \$30.	\$30 and under \$35.	\$35 and under \$40.	\$40 and under \$45.
BELL TELEPHONE SYSTEM.							
Bell Telephone Co. of Missouri, St. Louis, Mo.	\$29.44			34.76			
Bell Telephone Co. of Pennsylvania, Philadelphia, Pa.	29.16				36.27		
Central District and Printing Telegraph Co., Pittsburg, Pa.	27.55			54.75			
Central Union Telephone Co., Indianapolis, Ind.	25.04			39.44			
Chesapeake and Potomac Telephone Co., Baltimore, Md.	27.70				58.96		
Chesapeake and Potomac Telephone Co., Washington, D. C.	27.09				50.18		
Chicago Telephone Co., Chicago, Ill.	31.69				24.28		
Cincinnati and Suburban Bell Telephone Co., Cincinnati, Ohio.	27.74				45.54		
Citizens Telephone Co., Covington, Ky.	26.61				45.45		
Cleveland Telephone Co., Cleveland, Ohio.	25.59	33.34					
Colorado Telephone Co., Denver, Colo.	33.48					40.85	
Cumberland Telephone and Telegraph Co., Louisville, Ky.	23.31			42.02			
Cumberland Telephone and Telegraph Co., Nashville, Tenn.	22.40			58.29			
Cumberland Telephone and Telegraph Co., New Orleans, La.	24.37			57.14			
Missouri and Kansas Telephone Co., towns under 5,000.	18.21	38.73					
Missouri and Kansas Telephone Co., towns 5,000 and under 15,000.	19.92		50.94				
Missouri and Kansas Telephone Co., towns 15,000 and under 25,000.	22.98			39.50			
Missouri and Kansas Telephone Co., towns 25,000 and over.	26.03			25.23			
Nebraska Telephone Co., Omaha, Nebr.	29.52				32.68		
New England Telephone and Telegraph Co., Boston, Mass.	33.01				38.58		
New York Telephone Co., New York, N. Y.	36.96				36.53		
Northwestern Telephone Exchange Co., towns under 5,000.	23.71			50.00			
Northwestern Telephone Exchange Co., towns 5,000 and under 15,000.	25.17			34.23			
Northwestern Telephone Exchange Co., towns 15,000 and under 25,000.	22.63			41.67			
Northwestern Telephone Exchange Co., towns 25,000 and over.	27.99				36.31		
Pacific Telephone and Telegraph Co., Los Angeles, Cal.	35.09					28.83	
Pacific Telephone and Telegraph Co., Portland, Oreg.	34.74			32.73			
Pacific Telephone and Telegraph Co., San Francisco, Cal.	35.84			38.51			
Pacific Telephone and Telegraph Co., Seattle, Wash.	35.00			32.21			
Rocky Mountain Bell Telephone Co., Salt Lake City, Utah.	34.84					52.44	
Southern Bell Telephone and Telegraph Co., Atlanta, Ga.	24.78			33.81			
Southern Bell Telephone and Telegraph Co., Birmingham, Ala.	24.01			39.73			
Southern Bell Telephone and Telegraph Co., Richmond, Va.	25.53			43.86			
Southwestern Telegraph and Telephone Co., Dallas, Tex.	27.32				30.21		
All Bell companies	30.91				28.06		
INDEPENDENT COMPANIES.							
Kansas City Home Telephone Co., Kansas City, Mo.	26.00			53.42			
Louisville Home Telephone Co., Louisville, Ky.	19.07	430.40					
Maryland Telephone Co., Baltimore, Md.	25.27			50.00			
All independent companies	24.38			47.71			

• \$10 and under \$15.

AVERAGE MONTHLY RATE OF WAGES OF TELEPHONE OPERATORS AND CLASSIFIED WAGE GROUPS IN WHICH THE LARGEST PERCENTAGES OF OPERATORS ARE FOUND—Concluded.

Company.	Average monthly rate of wages.	Per cent of operators in wage group in which largest number are employed.					
		\$15 and under \$20.	\$20 and under \$25.	\$25 and under \$30.	\$30 and under \$35.	\$35 and under \$40.	\$40 and under \$45.
AMERICAN TELEPHONE AND TELEGRAPH COMPANY.							
Boston, Mass.....	\$32.79			33.33			
Chicago, Ill.....	30.87			52.43			
Cincinnati, Ohio.....	31.15			38.46		38.46	
Kansas City, Mo.....	30.00			57.14			
Minneapolis, Minn.....	30.38			46.15			
New York, N. Y.....	38.53						38.53
Philadelphia, Pa.....	33.49					31.51	
Pittsburg, Pa.....	33.79				27.27		
St. Louis, Mo.....	32.00				40.00	40.00	
All American Telephone and Telegraph Exchanges.	34.45			23.98			

This table shows that while the average monthly rate in St. Louis, Mo., is, for the Bell company, \$29.44, the largest number of operators have a rate of \$25 and under \$30 a month, and that this greatest number of operators constitutes 34.76 per cent of all operators. In Baltimore, while the average is \$27.70, 58.96 per cent of all operators have a monthly rate of \$30 and under \$35. In New York City, with an average rate for all of \$36.96, the largest number, which by reference to general Table V, E, page 320, is ascertained to be 1,032, or 36.53 per cent, falls in the \$30 and under \$35 classification.

To go a step further in the analysis of this average, let us take up the figures for Chicago, in connection with the automatic-promotion schedule shown above.

The average monthly rate of wages for 3,385 Bell telephone switchboard operators in Chicago is \$31.69. Of these, 731, or 21.6 per cent, are in the group receiving \$20 and under \$25 a month, which would include those who had worked six months or less at the switchboard, according to the company's scale of promotions. The second group rate, i. e., \$25 and under \$30, would include, in a general way, all who had worked more than six months and less than one year, except the short-day operators; in this grouping we find 459 operators, or 13.56 per cent of the total. The \$30 and under \$35 group given in the text table above, and which contains 822 persons as shown by the general table, comprises 24.28 per cent of all operators. This group includes practically all those who are in the second year of their employment as telephone operators. The next group, \$35 and under \$40, contains 732 persons, or 21.62 per cent of all operators, and in a general way includes all third-year operators.

In cities where an automatic system of wage-rate increases prevail, these percentages at given rates indicate in a general way the length of service of the employees.

Combining these data by systems, as the Bell companies, independent companies, and American Telephone and Telegraph Company, and disregarding localities, the following table shows the number of female switchboard operators working at classified monthly rates of wages, and the per cent that number is of the total number of such operators reported by the system. For the Bell system, the largest number of operators, 4,562, fall in the \$30 and under \$35 class, and these constitute 28.06 per cent of the 16,258 operators working for the Bell companies from whom pay-roll cards were received. Of the 513 female operators reported by the American Telephone and Telegraph Company exchanges, 123, or 23.98 per cent, fall in the \$25 and under \$30 group, and this was the largest number falling in any one group; while 271 operators out of the 568 returns from independent companies fall within the same group, and these constitute 47.71 per cent of that total.

NUMBER AND PER CENT OF TELEPHONE OPERATORS IN EACH CLASSIFIED WAGE GROUP, BY SYSTEMS.

Classified rates of wages.	Operators employed by—					
	Bell system.		Independent companies.		American Telephone and Telegraph Company.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$10.....	17	0.10				
\$10 and under \$15.....	109	.67	39	6.87		
\$15 and under \$20.....	789	4.85	35	6.16		
\$20 and under \$25.....	2,194	13.49	161	28.35	6	1.17
\$25 and under \$30.....	3,658	22.50	271	47.71	123	23.98
\$30 and under \$35.....	4,562	28.06	60	10.56	87	16.96
\$35 and under \$40.....	2,854	17.55	1	.18	117	22.81
\$40 and under \$45.....	1,742	10.71	1	.18	117	22.81
\$45 and under \$50.....	272	1.67			48	9.36
\$50 and under \$55.....	42	.26			15	2.92
\$55 and over.....	19	.12				
Total.....	a 16,258	100.00	568	100.00	513	100.00

a Not including 1 operator, rate not reported.

RATES CHARGED FOR SERVICE.

General Table I, D, pages 136 to 144 of this report, gives in some detail the various classes of service furnished the public by the several companies and the rates charged for such various services.

The flat rate one party or special line service system is that for which a lump sum per telephone station per year or month is paid, the user being entitled to an unlimited number of calls, or unlimited use of his telephone, for both outgoing and incoming calls. This rate

applies to single wire connections between the telephone instrument and the exchange to which it is attached, and to which wire line connections no other telephone user is connected.

Flat rate party line, unlimited service, means that two or more telephones are connected with the same wire leading to the exchange and that the use of the telephone by any one of these precludes its use for the time by others on the line. Party line rates decrease as the number of parties on the line increases. At one time in some cities as many as 12 parties were served by one line. This usually applies to residence districts, and where 12 residences have their telephones connected with one wire leading to their exchange the restrictions on its use for any one of them become sometimes severe, though the company places no limit upon the use of the wire itself. The tendency has been more recently to limit the party-line service to four, and in a few places six parties to one line. Flat rates, whether for single telephones—i. e., special lines, or for party lines—generally restrict the users to calls within a certain zone or area, or to telephone connected with certain exchanges, beyond or outside of which “toll rates” apply even to users paying flat rates.

In a few instances the distance of the telephone from its connecting exchange is an element in the rate.

Measured service means a rate at which a certain maximum number of calls per month or year is allowed for the lump sum designated as the rate, while additional calls are charged for at a stipulated price per call. A measured service special line rate would mean, for instance, a telephone with no other party on the line, over which 800 calls could be made per year for \$60 a year, additional calls to be paid for at 2 cents per call. Measured service rates apply to business and to residence telephones, and to a more than one party line in precisely the same way that flat rates apply. As in flat rates, the measured service rate on a more than one party line is usually lowered as the number of parties on the line increases.

Automatic slot machine rates are, of course, by the single call, except that in some instances they are installed on a guarantee of a certain number of calls per month and a less rate charged for additional calls. Some companies make special rates to joint users of one telephone; others do not.

For comparison of rates between cities or of any one city with others, the reader must refer to the general table, as manifestly no satisfactory combination for comparative purposes can be made here.

GENERAL SUMMARY AND REVIEW.

The telephone industry presents a number of peculiar features from the point of view of labor. It is one of the large industries for the employment of women. One branch of it, switchboard oper-

ating—at first the work of men and young boys—has gradually been monopolized by women, until, except in rare instances (usually on night work in lonely and unprotected exchanges) men are no longer employed. The number of women in this branch of work is rapidly increasing, so that in many cities it now ranks among the chief occupations for women, and everywhere ranks close after saleswomen and stenographers as a field of work for women. To these callings it is further analogous in that it draws its personnel from the same social groups.

From the point of view of the conditions of labor the telephone industry is peculiar in that it requires continuous work for 24 hours each day, 365 days each year, with never a holiday to “stop the machinery.” Furthermore, it does not afford a steady volume of work. The “load,” or number of calls received, is not constant in quantity, but reaches its maximum, known as the “peak of the load,” between ten and eleven o’clock each morning, then subsides, and rises to a slightly less heavy load during the latter part of the afternoon. The hours at which the loads are heaviest in residential districts are slightly different from those in business districts. In the evening and on Sundays and holidays when the work in the latter districts is at its lowest, the residence telephones are usually busiest. This gives rise to peculiar conditions, requiring special organization of the labor forces, as regards shifts and hours, to meet the varying volume of traffic.

To the public a telephone is a bit of pure mechanism in which the personal element has little play. This attitude is largely the result of the highly organized methods employed in manipulating the telephone system, whereby the subscriber is but seldom brought into personal contact with the operators of the mechanism. Let, however, a delay occur or a mistake be made, and the subscriber is at once keenly alive to the human element at the other end of the line in the person of the operator, whom he deems responsible for this condition. The delay may perhaps have been due to the operator’s mistake or carelessness, but again it may have been due to some outside cause for which she was not responsible—some sudden and unexpected trouble on the wires which caused her to get false signals; a change in the subscriber’s number, or any one of a dozen causes. The operator is not permitted to take time to explain, lest in so doing a dozen other subscribers be kept waiting for service. While she has been caring for one call, others have been waiting, and she must answer as rapidly as possible, and above all, must not show haste or carelessness in her manner of answering. The efficiency of the telephone service is to be traced in a large measure to the work of the operator and the conditions under which her work is performed.

The center of the telephone system is the exchange. Here are located the large switchboards by means of which subscribers' telephones are interconnected. On entering this room one sees a number of young women seated side by side, on adjustable chairs facing the switchboards. These consist of a cabinet about six feet in height from which, at an elevation convenient for the seated operators, extends a horizontal shelf from 6 to 14 inches in width. On this shelf are the cords and plugs used by the operator in making connections. Here are also the keys by which she rings her subscriber's telephone bells and opens the circuit wires to put herself in communication with the subscriber.

Above the key shelf, on the vertical part of the switchboard, every telephone has its terminal or answering "jack," which consists of two small metal springs set in a circular orifice connected to the subscriber's line. On the newer type of common battery boards there is a central lamp known as the "pilot lamp" which tells the operator whenever a call comes on her board. There is also a small lamp located directly under each terminal, and when a subscriber signals the operator for service, both these lamps light and show her whence the call comes. The older switchboards display a number called a "drop" because of the method of signaling.

The switchboard is usually divided into sections of about six feet in length. Each of these sections is occupied by three operators' positions, allowing 24 inches approximately to one operator. On the lower part of each position are a certain number of subscribers' terminals, and above these are the "multiple" jacks by means of which the operator can connect the calling party with the person or station desired. These jacks are repeated or "multiplied" throughout the switchboard, usually once in each section. This arrangement makes it possible for an operator to reach any one of the "multiple" jacks at any part of the switchboard without having to learn relative positions of lines anew.

Switchboards are either of the common battery or of the magneto type. The former are used almost entirely in large cities, and therefore serve the bulk of telephone subscribers. These switchboards are practically all of the manual type, that require the work of an operator to complete connections. The automatic telephones are not yet extensively used. In small towns there is usually but one exchange. In larger cities it has been found of greater value to have several exchanges in different parts of the city, each with facilities for completing the connections of its local subscribers. If the calls are for another district, they are "trunked" to the exchange in that district, where the connection is completed.

The telephone line consists of two wires which lead from the subscriber's instrument through overhead wires or cables or through

underground cables to the switchboard in the exchange. When a subscriber wishes to use his telephone, he turns the handle of his magnetogenerator or lifts the receiver from the hook. Thereupon a signal is displayed at the terminal of his line on the switchboard. When the operator receives this signal, she connects her "set" (a receiver strapped upon her ear and a transmitter suspended in front of her) with the subscriber's terminal. She then throws a lever, known as a "listening key," which puts her in communication with the calling party. This action extinguishes the signal, if a lamp signal is used. She asks the number wanted and connects the lines. This is done with short flexible cords ending in metal plugs, one plug being inserted in the subscriber's line and the other in the end of the line belonging to the called party. Before inserting the plug in the line of the called party, however, the operator tests the line by touching the end of the plug to the line's spring jack. If the line is busy, this action causes the operator's receiver to emit a loud click; if the line is out of order, a singing sound is heard, and the operator so reports to the calling party. If no sound is heard, the plug is inserted in the spring jack. The operator then rings the called party by means of a key which turns on the ringing current, at the same time disconnecting her listening circuit.

Connected with each pair of cords and plugs are two small lamps, each lamp acting as signal for the cord with which it corresponds. When the operator inserts the plug into each jack, the corresponding lamp is lighted. When the called party removes his receiver from the hook, these lights are extinguished, showing the operator that her ringing has been answered. During conversation the lamps are out, but as soon as the parties thereto hang up their receivers both lamps light. This signals the operator to take down the connection and leave the jacks free for use on another call. If either subscriber wishes to attract the attention of the operator, he moves his receiver hook up and down several times, and that in turn causes the corresponding lamp to flash as a signal for the operator to open her listening key and ask what he wishes.

In the large cities not all subscribers' lines terminate in any one exchange. A system has been devised whereby a connecting link is established between the exchanges. The subscribers' lines are connected at the ends of this link and so put into communication. The general method of establishing this connection is as follows: When an operator receives a call for a subscriber whose line does not terminate in the exchange in which she is located, she is unable to complete the connection herself. She then has recourse to what is known as "trunking" the call—that is, she employs a line called a "circuit" or "order" wire, and by this means reaches an operator in the exchange wanted. These order wires are special circuits by

which any subscriber's operator may put herself in communication with a trunking operator in each of the other exchanges. Having reached a trunking operator, she repeats the number desired, and the operator in the second exchange thereupon assigns a "trunk" line, over which connection is established between the two exchanges and the called party's line is joined thereto and the parties put into communication.

The operator who receives calls direct from subscribers is known as an "A" operator and her board as an "A" board. The operator who receives calls from operators in other exchanges and assigns trunk lines to them in order to complete connections is known as a "B" operator and her board as the "B" board. Sometimes an "A" board is built to receive incoming calls only and has no multiple, and in this case the calls are trunked over to the local "B" operator in the same way that calls between exchanges are handled.

The methods of making connections above outlined are those followed in the usual local connection. There are, however, three distinct types of telephone messages: Local, long distance, and toll. A local message is ordinarily one that is conveyed within the city in which the calling subscribers are located. A toll message is a message traveling between two public exchanges that belong to the same system, but are, as a rule, located in different towns. A long-distance message is usually one that passes between exchanges of two different systems.

For the work in the operating room there is one general form of organization modified to suit local needs. Naturally the larger number of the employees attend to the ordinary routine of interconnecting subscribers. For efficient and rapid work they are held to a strict discipline, with well-defined duties for each group of employees. The usual arrangement of force and assignment of duties is thus outlined:

The operator is the person who comes in direct contact with the subscriber, taking his orders and making connections for him. She is permitted the use of certain set phrases only and is not allowed to enter into any conversation with subscribers, lest by so doing she fail to answer other calls that are awaiting her service. There are sometimes a great number of calls coming to her at one time during busy hours, and before these are all answered, several more may be awaiting attention. The operators are supposed not only to answer the calls arising directly in front of them, but also to assist the operators on either side of them when possible.

Back of the operators' positions walk the supervisors. Each supervisor is assigned to a group of from six to fifteen operators, to help them when they are too busy, to correct mistakes, and handle any complications. In case circumstances arise which make it necessary to enter into explanations with a subscriber, the operator dis-

plays a signal which calls her supervisor to handle the matter. Each supervisor usually has assigned to her a "senior operator," whose duty is to fill any vacant place at the switchboard or relieve the supervisor in case she becomes ill or is obliged to leave her position temporarily. The supervisors are directly responsible to the chief operator and her assistant. These are generally the highest authorities in the operating room. The manager usually has charge of several offices in a group, and these group managers report to the superintendent of traffic, who is chief of the operating service.

There are also certain special operators: The information operator, whose duty it is to inform subscribers of numbers not yet in the telephone book and to give kindred information; the "trouble" or "hospital" operator, to whose position all "out of order" lines are connected until the maintenance department has located and removed the trouble; the monitor, who from a desk position listens on the various operators' lines. The monitors add another form of supervision, helping locate irregularities of service and certain mechanical troubles on the lines.

Telephone operating requires definite mental and physical qualifications, and also certain preliminary educational qualifications. Height, age, sight, hearing, and voice must all be considered. Enunciation must be clear and speech free from accent. This last-named qualification practically bars foreign-born women from finding places in an operating room.

The analysis made of a representative telephone office in a large city is typical of average nativity conditions. Of 70 operators in this exchange, 69 are reported as American born, the nationality of one is reported unknown. Of the 69, 47 are of American-born parents, 9 have one parent foreign born, and 13 are of foreign parentage.

Not only are there preliminary requisites of training, but before an applicant can "run" a switchboard special training in that work is required. Recognizing these facts, practically all of the larger telephone companies now maintain special schools in which operators are trained for their work before being sent to the switchboards in a public exchange.

While the opinions of different managers vary concerning the ages at which operators can best be trained, the limits are usually between fifteen and twenty-five years of age, a decided inclination toward the older group being shown for those who are designed for toll and long-distance operating. In most instances the applicants must be over five feet in height in order to be able to reach the required distances on the switchboard. Both sight and hearing must be unimpaired, and voice of good quality. Neatness and general appearance are taken into account, and while the educational standard varies,

most operators will be found to have had at least a fifth-grade education, while some companies exact a full grammar-school education as a requisite part of an applicant's attainments. In all companies it is usual to make some test of the applicant's sight, hearing, and enunciation, and to ask about her general health. When the close proximity in which operators must sit at the switchboard is remembered, the necessity of more universal adoption of closer medical tests for applicants will be apparent. Even aside from all other considerations, the financial saving to the telephone companies in not having the expense of training physically unfit persons has its due weight.

Once accepted, the applicant is sent to the school for a period, usually four weeks. She is there taught the methods of operating. Besides attending lectures, she spends some time at a dummy switchboard and is given practice in the actual handling of calls. These calls are made by the school instructors who at the same time supervise the manner in which the student answers and completes the connection. Thus the student enters the exchange with some grasp of the methods of actual service. The advantage of preliminary training, whether given in the school or in the exchange itself, is threefold: To the student it means a more thorough training under less nervous strain than would be possible in the busy exchange; to the telephone company it means an opportunity to weed out unsuitable students (which is indirectly an advantage to these students themselves in the saving of their time) and to secure more thoroughly instructed operators, thereby avoiding a large percentage of mistakes in the handling of calls; to the public it means service from a more competent operating force.

In any discussion of conditions under which women work in a telephone exchange certain facts relative to the peculiar nature of the occupation must be borne in mind in order to appreciate the need of special comfort and hygienic conditions in their surroundings. In the sewing trades, for instance, a person handling a high-power machine must keep his eyes watching and his hands guiding, but his mind need think of but one process, which in time becomes semi-mechanical. In feeding a machine the same conditions prevail. A stenographer and typewriter comes nearer to the telephone operator in the varied use of her faculties. Here, however, the introduction of the "touch system" has greatly lessened her eye strain when doing typewriting, and as she becomes expert she watches her page less closely when taking dictation or while doing court reporting.

In order to fulfill ideal requirements the operator must have her wits always alert, a quick eye, auditory nerves always ready to catch the words of the subscriber or supervisor, a steady hand, a pleasant and clear voice, and, first and last, ability to keep her temper un-

ruffled, no matter what happens. Not only must she be alert while actively occupied in answering calls, but she must watch constantly even when she sees no signal to be answered lest one escape her notice.

This is more readily appreciated when it is remembered that in the handling of the simplest form of connection, as above described, there are involved eleven processes on the usual type of common battery board. First, when attention is attracted by the pilot lamp (the general signal) the operator's eyes follow the lines of signals on the terminals on her position; (2) this located, she (3) puts the plug into the terminal, (4) opens her listening key, (5) asks for number desired, (6) locates that number on the multiple, (7) tests the jack to see that the line is not in use, (8) inserts her plug, (9) rings the called party. She then (10) must watch the signal lamps to see that the called party answers and that connection is established. As soon as the lamps relight she must be alert for this signal and (11) take down the cords at once. This is the simplest form of connection, and these processes—more complicated on the less direct forms of connection—are carried on during the entire working day, sometimes with such rapidity that over 350 connections are made in a busy hour. In fact, one exchange reported a record of 25 calls answered in 2 minutes and 9 seconds, or an average of 5.16 seconds per call. While this speed is nowhere long maintained, or even aimed at as a constant standard, there is even at the dullest hour the need of watchfulness lest a signal go unnoticed. This constant alertness for possible signals in itself involves continuous strain.

In the review of the methods of handling calls there is at once apparent the constant use of the eyes in finding numbers, in copying tickets on measured service and party-line calls, or in noting any lines "out of order" for the guidance of the maintenance department. The auditory nerves must be constantly active. The muscles of arms and hand are brought into constant play, this muscular action extending over the entire body when reaching for high numbers on the multiple; precision and a sense of touch are also involved, as the testing of a jack and the insertion of the plug require exactness. The voice must be kept clear and strong. The mind must be kept clear, to control at once each needed move, and the nerves must be steady. Colds and headache must be avoided, since they tend to at once deaden the special senses needed in giving satisfactory telephone operating. In order to keep the physical condition of the operator at a high standard, ventilation, heating, freedom from irritating effects of dust or draft must be striven for and light must be amply provided.

These being the conditions, it can readily be seen that the health of the operator is vital in the work she does, and that light, heat,

ventilation, and general comfort all play their part in the quality of service rendered. That the companies themselves recognize these facts is shown by the following quotation from an article entitled "A profession for women workers," published by one of the larger telephone companies: "The telephone company recognizes the influences which pleasant surroundings and comfortable and well-ventilated operating rooms have on the quality of work performed by the employees and that such environment attracts and keeps the better type. This in itself makes for better service and results in mutual benefit and satisfaction alike to the company, its employees, and its patrons."

Another factor to be borne in mind is that it is the universal policy of telephone companies to employ the best type of women obtainable, and to do this they must keep up the standard of the surroundings in which their employees pass their time.

For these reasons there will be found on the whole better conditions in the telephone exchange than in the average workroom or large office as regards lighting, heating, and ventilation. There are notable exceptions to this statement, chiefly in the case of exchanges that are in rented quarters, not built originally for the special purpose to which they have been put. However, in nearly every instance the light, natural and artificial, is sufficient. The daylight, in the operating room must not be too bright lest it make less noticeable the glowing of the signal lamps on the switchboard. In a number of exchanges there is resort to artificial light during the day.

Artificial light is abundantly supplied in all but a few instances. Working day after day and month after month in a room depending almost entirely upon artificial light is, however, depressing, if not unhealthful.

The usual method of lighting the board is to have a row of electric lights along the upper part of the switchboard, hooded so as to keep the light upon the board and out of the eyes of the operators.

It is a growing custom in telephone offices to place the boards around the room in the form of a "U." The face of the boards is toward the center of the room with the chief operators' and monitors' desks placed in the center. The windows are across the open end of the "U." Windows are also placed back of the boards; but in a number of instances these are not high enough to let in light and air above the board. One office has high windows with sashes which open inward from the top, thus cutting off direct draft. These sashes are painted green, which softens the light considerably.

Lack of sufficient ventilation seems to be one of the greatest faults to be found with telephone operating rooms. When boards are placed in the "U" shape described above the fresh air is largely cut off because the height of the switchboards makes a most effective

screen. When the boards are placed in a diametrically opposite formation, facing outward, so that operators sit with their backs to the windows there is constant complaint of drafts, and windows are kept closed when the general atmosphere of the room demands changing, so that often, despite the presence of fans and ample window space, the room is found to be close. This lack of ventilation is the more serious as the operators are seated closely side by side, two feet of board being the usual space allotted to a person. All possible care is therefore needed to keep the air pure and clean in order to counteract the possible effects of this crowded condition.

Some of the larger exchanges have systems of ventilation, forced drafts, etc., that keep the air changed, but in many instances, especially in medium-sized exchanges, windows and fans are relied upon. On rainy days the windows are often closed to keep the dampness from affecting the cords, although proper protective covering of cords would obviate the necessity of this. It must also be borne in mind that the room is in constant use, every hour out of the 24, every day in the year, week day and holiday alike. This means that there is never any considerable period of time when the room can be flooded with fresh air and all doors and windows opened without thought of cold or draft. Were the installation of a simple ventilating system a matter of great expense, the lack of it in many places could be reasonably accounted for, but when there are systems which are both inexpensive and in a large degree effective, one is at a loss to account for the poor ventilation.

The greater proportion of operators are seated during working hours, and special adjustable chairs are provided for their use. The supervising force is almost constantly standing or walking. In many exchanges rubber or cork composition carpets are laid back of the line of operators' chairs in order to make walking easier, but in a number of instances there is no covering over the wooden flooring.

In some cases when operating rooms were above even the second or third floor there were no elevators in the building, and in many cases elevators did not run at such times as they were needed by the operators. An apparently unnecessary amount of climbing stairs was found to exist.

In most of the telephone offices the toilets and wash-room facilities are ample, the plumbing modern, the walls and floors of tile or marble, towels and soap provided, and the rooms kept in excellent state of cleanliness. In two cities several of the larger exchanges are also provided with bath tubs, which are most valuable during the heat of summer, and especially to the night force.

A number of the larger telephone companies provide comfortably furnished lunch rooms and serve tea and coffee for their operators. In at least two cities a lunch of meat, fruit, bread, and butter is added,

without expense to the employees, while in several cities a lunch is sold at or below cost of the food. In a number of cities the matron in charge cooks free of expense any simple food brought by the operators, or orders may be left with the matron and food brought in from near-by restaurants. Some cities make ample provision in their larger exchanges, but in the outlying districts, where most of the operators live near their place of work, make no provision or supply no more than a table and gas stove. In a number of instances, notably in the exchanges of a company operating in several cities, an insufficient monthly allowance of coffee and tea is made.

Night operators are more in need of hot food, or at least coffee, than are the day operators. That this provision is not made was seen in a number of exchanges visited. Even where no food is supplied night operators, there should be a stove and cooking utensils provided, although the force may consist of but one or two women. It is difficult enough to make a cold lunch suffice in the daytime; at night the stimulus supplied by warm food is almost imperative.

The necessity for a place of rest during relief periods is universally recognized. All exchanges visited reserve some space where operators may spend relief and rest periods. In some instances these are only combination rest and lunch rooms.

In all exchanges of any size, separate lockers are provided, each locker being assigned to two operators. The tendency is to put in openwork metal lockers which can be kept clean and well aired. Insufficient locker room is not uncommon, there being many places where three operators are obliged to share one locker and other places where part of the force are obliged to leave wraps on the tables or on nails on rest-room walls.

In larger exchanges where night operators are granted some time during the night for sleeping, the provisions vary. In some places wicker couches are supplied. Some companies allow blankets and pillows also. One company, operating in several cities, has separate bedrooms, with iron beds and complete bedding. The value of this is, however, abated by the fact that there are not enough beds. Two operators are often obliged to share a bed, and one relay after the other occupies the same bed, using the same sheets, pillow cases, etc. Where some operators are scrupulously careful, and others are decidedly careless, the dangers of infection far overbalance the comfort derived from this arrangement.

The most general source of danger of infection lies in the telephone receiver. Except where the receiver is suspended from the board itself (usual in toll offices) each operator is assigned her own "set" of receiver and transmitter, which she keeps in her locker or in a separate pigeonhole. Some of the companies are most careful in the regular disinfection of these "sets."

It is to be regretted that more complete data were not secured relative to the systematic disinfection of operating sets, and that these data were not also secured from the companies to ascertain their rules.

Transmitters and receivers serve as media of infection, especially in relation to tuberculosis. Although in many cases transmitters and receivers are carefully disinfected, this rule is far from universal. Where transmitters are suspended from the switchboard to be used by any operator, the danger is increased a hundredfold. Where there are no fixed transmitters and operators are supposed to keep their own "sets," there is more or less interchange of apparatus. This is due to the carelessness of some operators who go to the wrong pigeonhole or borrow a "set" from the bag of a locker mate. In either of these cases the rightful owner of the "set" may be on another shift and never learn that her apparatus has been used by some one else. Often, through thoughtlessness, an operator finding her "set" gone uses that of another person.

In making provision for the comfort of operators a number of telephone companies have gone beyond the establishment of lunch rooms, rest, and locker rooms. In one large city, for instance, wherever property lines permit, the land adjacent to the exchange is made into a garden for the use of the operators. A number of the employees enjoy cultivating their own flower or vegetable beds, while others use the swings and garden chairs. In several metropolitan exchanges, the roof has been fitted with awnings and utilized as a summer rest room. Where this has been done it has provided most comfortable places of rest for employees, at very slight expense to the company.

For a number of years various companies have supplied current magazines for their rest rooms, and operators have started libraries. In one instance, half the expense of all books purchased is borne by the company. In one city the telephone company facilitates the use of the public library by the operators in its large metropolitan exchanges. This company acts as guarantor for its operating force and sends its wagon to exchange books daily. It furthermore employs a trained library supervisor, who assists the operators in their choice of books. This supervisor edits also a monthly magazine for circulation among the operating force. This publication contains technical articles in popular form, matters of local interest, and a series of "health talks" by the company's physician. A number of telephone companies publish monthly journals for distribution throughout their various departments.

In two cities some means of indoor exercise are provided, the one games, the other punching bags. In one city a piano has been placed in the large rest room and during recreation periods the operators are permitted to dance. As most of the operating force is seated the greater

part of the day, recreation which involves standing and not too violent motion stimulates circulation and is in itself a rest as well as a pleasure. In two cities occasional theatrical performances or other entertainments are given. The operating force are the guests and also provide a large proportion of the entertainers. One exchange contains its own theater. In one city the operators have formed a singing club. In several cities the operators have formed social clubs, sometimes in connection with the libraries, and the small dues are used for the purchase of books, flowers for members of the force who are ill, and an occasional outing for a day in the country or for a theater party.

A very successful branch of a stamp savings society in one exchange has aided operators in saving up the means for needed summer vacations or starting small savings accounts. A unique and practical provision in a large exchange is a series of steam clothes driers, where on stormy days, operators who arrive at the exchange in wet skirts, may have their clothes rapidly dried. That this provision must keep down the percentage of absences caused by colds and sore throats, is obvious, but it is of course practicable only in an exchange employing a large number of persons.

Evening and split-trick work introduce one factor into telephone work which is not properly recognized except by one company. This is the fact that a large number of young women, many of them under 18 years of age, are obliged to go home after nightfall.

Overtime seems to be an integral part of the schedule of hours in a number of telephone companies. Operators not only are asked to take their turn in working extra hours, but in some companies a regular extra period is assigned for certain days each week to each operator. She is virtually compelled to do this extra work, lest by refusing she incur the displeasure of her chief operator or get the reputation of shirking her share of work.

This overtime varies in length from a few minutes to two and one-half hours, one company even posting a list apportioning two nights a week to each operator, on which nights she must be prepared to work overtime, if required. In one exchange operators report five days' suspension for refusal to work overtime. Overtime is often most inconvenient, as in some companies it is demanded without previous notice and at times when it is practically impossible for an operator to remain at work. The rules requiring overtime need not necessarily involve hardship, conditions depending very much upon their administration. Several companies have obviated real grievances by a system of calling for volunteers when necessity for overtime arises.

A method of overtime work known as "working through" is in force in some cities, although this is never made compulsory. This means working on either split-trick or evening shift and then remain-

ing on the night shift. In one company where the split-trick hours are 11 a. m. to 2 p. m. and 4 p. m. to 9 p. m. an operator "working through" would work from 11 a. m. to 2 p. m. and again from 4 p. m. to 7 a. m., with $4\frac{1}{2}$ hours off during the night for lunch and sleep (a total of $13\frac{1}{2}$ hours). The next day the operator reports as usual. In one case a 15-year-old girl (who claims to be 16) reported "working through" four times in two weeks.

A certain amount of Sunday work is required of all operators except the chief operators. Supervisors in some cities work a less number of Sundays per month than operators. Operators working in purely business sections work a less number of Sundays per month than operators in a residential district, as the bulk of Sunday and holiday work lies in the residential districts.

Holiday work is also required. Operators are given either a certain proportion of holidays free or a half day's work on each holiday. The number of recognized holidays varies from six to one, so that in no instance can an operator reckon on many special free days. A few companies grant Saturday half holiday during the summer, the operator getting a half day on alternate weeks. One company grants a half holiday each month for three consecutive months of good attendance, but, on the whole, holidays are the exception and not the rule.

In some exchanges it is so difficult for operators to get a day off if they ask for it in advance that they perforce resort to the trick of "playing sick." In other exchanges operators know that if they ask in advance, their chief operator will do all in her power to obtain a substitute at their positions or allow them to furnish a suitable substitute. Where the latter method is in vogue, a refusal to grant the extra day of leave is usually taken in good part by the operator who realizes that at least an effort has been made in her behalf and the resultant loyalty is most apparent.

Nearly all the larger telephone companies grant one week vacation with pay to all operators who have completed a year of service. Some companies permit operators to take a second week at their own expense, with the assurance that their positions will be held for them.

There is no regular provision for sick leave. Only in most exceptional cases is sick leave with pay granted to an operator. There is considerable complaint on the part of operators concerning the difficulty of getting "relief" when ill. Some of them even stated that when feeling slightly ill they would stay home and lose a whole day's work rather than go to the exchange and risk being refused permission to go home should their illness grow more serious.

These conditions—curtailment of relief, compulsory overtime work, Sunday and holiday work—can not perhaps be done away with entirely, owing to the peculiar conditions of telephone work. That these

conditions could, to a large degree, be modified by the employment of a proportionate relief force is shown by the experience of exchanges where this is done. In these exchanges overtime comes but seldom, and then usually as a result of abnormal number of absences from the operating force or of an unexpected load of business on the wires. Such exceptional conditions are likely to happen in any exchange, and operators on these occasions are, as a rule, willing to give the extra time demanded of them. Thus at the time of a great fire (Iroquois Theater, Chicago), when hundreds of lives were lost, operators actually refused to leave their posts when told to do so and had to be forced to take rest. Many of them did not go away from the exchange building for over twenty-four hours. Such events are, however, beside the question. The grievance is in this time schedule which, in addition to a definite number of hours of regular work, imposes also overtime at least one day a week (usually about $2\frac{1}{2}$ hours) and also work on two Sundays out of the month. For the operator such a schedule signifies practically no time for recreation or for rest.

In the normal 30-day month, on an $8\frac{1}{2}$ -hour schedule, it means 248 hours work, a weekly rate of $57\frac{3}{4}$ hours, while a 9-hour day would give a weekly rate of 61 hours. ^(a) Although a glance at the usual day's schedule gives the impression of a short working day in the telephone industry, the weekly total of hours is proof that the hours are not short. A week of $57\frac{3}{4}$ to 61 hours means longer hours than are demanded in department stores, offices, and even in most factories. These conditions can be remedied, as is shown by the schedule of several important companies. A small force of extra relief operators would, to a large degree, minimize the curtailment of relief periods and the amount of overtime required as well as somewhat reduce the amount of holiday work required. While there must always be Sunday and holiday work, at least two large companies have discovered that this need not mean seven days' work each week. They require their operating force to take one day's holiday during the week when Sunday service has been rendered. Some operators object to this enforced holiday, others prefer the occasional free week day. Whatever be the preferences of the operators, there can be no doubt that the general result must in the long run make for health.

Many operators desire overtime because their financial needs are such that all extra earnings mean much to them, but where overtime is not paid at a higher rate it is only the exceptional woman who desires it; who does not specifically state that the "regular week's

^a In cases where operators "work through" twice a week (as elsewhere described) would bring the total up to 67. While this is not a regular thing, it is done with sufficient frequency to be worth noting.

work is all she can do." It would seem, therefore, that unless driven by need, the workers themselves feel overtime to be too great a physical tax.

In a city, for example, where overtime is not above the average the company reports that day operators are on the premises 10 hours with $1\frac{1}{2}$ hours out for lunch and relief, but on overtime they are on the premises $12\frac{1}{2}$ hours. Allowing $\frac{1}{2}$ hour out for supper, their $8\frac{1}{2}$ hours actual work become $10\frac{1}{2}$ hours.

In the same city the split-time operators work $8\frac{1}{2}$ or $8\frac{3}{4}$ hours per day, their free time being $2\frac{1}{2}$, 3, or 4 hours between tricks, so that they have time to go home to dinner. But many of them have such hours that to all practical purposes they have lost both day and evening for their own use, and the same may be said of many evening operators who begin work at 11 a. m. and work until 8.30 or 9.30 p. m. The great objection to split time, which gives the usual working hours spread over an unusually long day, is that the feeling that work is not over and that one must go back for several hours more keeps the free hours between tricks from meaning the complete rest and relaxation that comes with the sense that the day's work is done.

A glance at the table of hours will show that 12, 13, and even 14 hours a day are not unusual limits of split-time tricks; and while these may mean only 7 to $8\frac{3}{4}$ hours actual work, they also mean that a woman who leaves her home before six in the morning to work, does not fully lay off that burden of work until after eight at night, and in many instances lives too far from her work to make going home between tricks advisable or restful.

In the very large companies the new operators who are assigned to either evening or split-time work are reasonably sure of being advanced to regular day work within their first year, but in the smaller cities this is less true, and the plan adopted by one company of having all operators take one day a week on split time, not only insures having a goodly number of experienced operators at work during the peak of the load both a. m. and p. m., but also prevents split time being too great a burden. While some operators object to this and feel that the "new girls" should bear all the burden, there is a large proportion who say that doing split time once a week on a regular day gives them a chance to attend to business matters before the closing of shops and offices.

CHAPTER II.

ANALYSIS OF TABLES.

CHAPTER II.

ANALYSIS OF TABLES.

The tables which form the statistical part of this report are listed by titles as follows:

TABLE I.—Employment and working conditions in specified telephone companies, as reported by officials of the companies:

- A.—Location and size of operating rooms and air space per person.
- B.—Time allowance for handling calls, plug connections per hour, length of overtime day and rate paid, minimum age of employees, and wages at beginning work.
- C.—Shifts required, companies providing night alarms and in which overtime work is optional, and holidays and vacations granted.
- D.—Rates charged for telephone service.
- E.—Distribution of operators, total original calls, and average calls per operator, during each hour of the day.

TABLE II.—Working conditions in specified telephone companies, as reported by special agents.

TABLE III.—Summary of employment and working conditions in telephone companies, as reported by employees:

- A.—Occupation, sex, length of employment in telephone service, and age of employees at entering service.
- B.—Lunch time, relief, and number of employees working overtime.
- C.—Length of overtime day, choice of exchange and hours of work, health, care of operating set, and number of employees who live at home or board and who ride or walk to work.

TABLE IV.—Summary, for all telephone companies, of employment and working conditions, as reported by employees:

- A.—Occupation, sex, length of employment in telephone service, and age of employees at entering service.
- B.—Lunch time, relief, and number of employees working overtime.
- C.—Length of overtime day, choice of exchange and hours of work, health, care of operating set, and number of employees who live at home or board and who ride or walk to work.

TABLE V.—Rates of wages and earnings of employees in certain telephone companies during a pay-roll period in 1908, as reported by officials of the companies:

- A.—Classified rates of wages, and hours of labor, by occupations.
- B.—Summary, for telephone systems, of classified rates of wages, and hours of labor, by occupations.
- C.—Number and per cent of employees whose earnings during their respective pay-roll period were less than, equal to, or greater than full-time earnings at specified rates.
- D.—Summary, for telephone systems, of number and per cent of employees whose earnings during their respective pay-roll period were less than, equal to, or greater than full-time earnings at specified rates.
- E.—Number and per cent of operators, by classified wage groups.

The summary for all companies of operators by classified wage groups, being a summary of Table V, E, has been used as a text table in the discussion of wages and will be found on page 97 of this report.

A brief explanation of these various tables follows:

Table I covers all of the essential details of employment and working conditions, by companies and by cities and towns, as recorded by

officials of such companies, on the establishment schedule or B. L. 433, a copy of which is given in Appendix A, pages 325 to 327.

Table I, A. This table deals with size of operating rooms, from which cubic contents is derived, expressed in cubic feet of air space. The table shows the maximum number of persons employed in such rooms and the cubic feet in room per person so employed. Assuming 500 cubic feet per person as the standard of reasonable requirements for working space, the facts developed in this table will be found sufficiently commented upon in the text.

Table I, B, deals with the character of calls handled by the company reporting, time allowed operators for handling calls, the number of calls per hour which an operator on an "A" board and an operator on a "B" board would be expected to handle to be considered efficient, the maximum length of overtime day, and the rate at which overtime is paid for as compared with regular time rates.

The overtime day here must be understood to be the regular hours plus the overtime. That is, the hours shown in this table are not overtime hours but the total hours for an employee on days when overtime is worked. If an operative's regular hours were 9 and she was required at times to work a maximum of 2 hours overtime, the maximum length of her overtime day as shown in this table would be 11 hours.

The concluding columns in this table show the minimum age at which applicants for employment are accepted and the rate of wages paid beginners. The essential conditions developed by this table have been considered in Chapter I.

Table I, C. This table deals with required shifts of employment or tricks; whether or not the company supplies night alarms, commonly known as "buzzers," for night operators; and whether or not the matter of working overtime is optional with employees (24 companies reporting that it is optional, 27 reporting that with them it is not). The question of each company's practices as to holidays and vacations is brought out by this table, as is also the payment or nonpayment of applicants while in training or learning the business. Here we find that 42 companies pay operatives while learning, while 10 companies do not.

Some explanation is perhaps necessary to a proper understanding of the use and purpose of night alarms as brought out in this table. It frequently happens that during certain hours of the night the calls are so few that it becomes very tiresome and entirely unnecessary for the night operators to sit at their positions at the switchboard. Some companies provide an arrangement which acts in the night as the "pilot lamp" does in the day, i. e., it notifies the operator that there is a call. These alarms or buzzers may be placed at the head of a couch or in the rest room, and so enable the night force to be as comfortable as possible and yet not neglect their duties.

Table I, D. This table deals with the rates the public pays for various forms of telephone service by the several companies in the cities named. An explanation of the various kinds of service is given in Chapter I, pages 97 and 98.

Table I, E. This table deals with the distribution of operators in exchanges by hours of the day, the number of original calls by hours, and by derivation the average number of calls per operator at given hours. The significance of this table is fully discussed in Chapter I, pages 24 to 38.

Table II. The source of the data presented in this table is the agents' personal observation schedule, a copy of which is presented in Appendix A, page 329. These schedules were filled for such exchanges as the special agents of the bureau were able to visit. The table covers the general working conditions as seen by the agents and deals with the floor on which operating rooms are located, use of elevators by employees, provisions as to stairways and fire escapes, sufficiency or insufficiency of light by day and by night, ventilation, provisions for lunch rooms, and the question of toilet facilities for women employees.

Table III. The data for this table are derived from the individual schedule, B. L. 430, reproduced in Appendix A, pages 330 to 332.

These schedules were secured from employees (mostly from switch-board operators) of the various companies in various cities, by means of personal interviews by special agents of the bureau. Employees to the number of 427 were so interviewed, and this table is a summary of employment and working conditions in the telephone industry as reported by these employees to the special agents.

Table III, A. This table summarizes for all cities the data on individual schedules covering the matter of occupation, sex, years of employment in telephone service, and age of employees at entering such service.

Table III, B. This table continues the information covered by the individual schedules, and deals by occupation with the lunch period of employees, relief or rest periods, and the curtailment of these at times. The subject of overtime and its desirability from the viewpoint of the employee interviewed is given in the final columns.

Table III, C. This table further continues the summary of information from the individual schedules, and deals with the maximum length of overtime day as reported by employees; the number of employees interviewed who, in practice, have been given any choice as to the exchange at which they should work; those whose health has been injuriously affected and those who have found their employment beneficial; the number who have operating sets for individual use and the number having such disinfected regularly and at will; and the number who board and who live at home, together with those who walk to their work and those who ride.

Table IV. This table presents the same data shown in Table III, but further summarized to condense the information from all employees interviewed on the points covered, without relation to the companies by whom they were employed.

Table V. This table deals with the monthly rates of wages of employees of telephone companies named, as reported by officials of the companies. Its source is the pay-roll cards, B. L. 436, as shown in Appendix A, page 330. There were received sufficiently complete for tabulation 39,586 such pay-roll cards.

Table V, A. This table deals with rates of wages by classified rates, showing occupations, hours per regular full day, total number in each occupation, and distribution by sex and classified rates of wages. This table gives information for each city, and the cities are grouped according to telephone systems, as Bell system, etc. It is the detail table for rates of wages, and gives by localities all the information derivable from the pay-roll cards.

Table V, B. This table is a summary, by telephone systems or groups of companies, of the information detailed in the preceding table; that is, it gives by general groups, but not by localities or specific companies, the classified rates of monthly wages and the hours of labor, by occupations.

Table V, C. This table deals with the number and per cent of employees whose earnings during their respective pay-roll period were less than, equal to, or greater than the full-time earnings at the rate at which they were employed. These data are given by companies and by cities. It should be borne in mind that employees whose pay-roll cards showed the earnings during the pay period to be less than the rate at full time may have been new employees who began their services after the opening of the pay-roll period, and hence this is not an accurate index to loss of time whether from sickness or fault of employees or from lack of work. On the other hand, an excess of rate may mean Sunday and holiday work as well as overtime, and hence can not be taken as a reliable measure of either.

Table V, D. This table summarizes the foregoing, by telephone systems, regardless of localities or individual companies.

Table V, E. This table deals with switchboard operators only and shows the number working for each company in each city by classified monthly wage-rate groups, and the percentage that the number in each wage-rate group bears to the total number of operators in that city or group of towns. By comparing the last column of Table I, B, which shows by cities the rate paid operators at beginning of service with the corresponding wage-rate grouping in this table, the reader will be enabled to note with approximate accuracy the number and per cent of operators in any locality who are practically beginners. The summary of this table is given in Chapter I, page 97.

CHAPTER III.

GENERAL TABLES.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES.

A.—LOCATION AND SIZE OF OPERATING ROOMS AND AIR SPACE PER PERSON.

BELL TELEPHONE SYSTEM.

Company and exchange.	Floor on which located.	Operating rooms.				Maximum number of persons in room.	Cubic feet in room per person.
		Dimensions, in feet.					
		Length.	Width.	Height.	Cubic contents in cubic feet.		
Bell Telephone Co. of Missouri:							
St. Louis, Mo.:							
Main.....	6th.....	104	46 $\frac{6}{12}$	15 $\frac{6}{12}$	74,958	85	881.9
Forest.....	2d.....	137	30	16	65,760	65	1,011.7
Olive.....	5th.....	47 $\frac{3}{12}$	44	14 $\frac{2}{12}$	29,453	20	1,472.7
Lindell.....	3d.....	28	23 $\frac{6}{12}$	11 $\frac{6}{12}$	7,567	8	945.9
Grand.....	2d.....	84 $\frac{6}{12}$	37 $\frac{6}{12}$	13 $\frac{6}{12}$	41,986	38	1,104.9
Sidney.....	1st.....	62	31	13 $\frac{6}{12}$	25,306	20	1,265.3
Tyler.....	1st.....	45	22 $\frac{4}{12}$	11 $\frac{6}{12}$	11,809	17	694.6
Bridge.....	1st.....	77	33	14 $\frac{6}{12}$	36,845	16	2,302.8
Bomont.....	2d.....	96 $\frac{6}{12}$	36 $\frac{1}{12}$	13 $\frac{6}{12}$	47,535	17	2,796.2
South.....	2d.....	68 $\frac{6}{12}$	30 $\frac{6}{12}$	17	35,420	17	2,083.5
Benton.....	1st.....	30 $\frac{7}{12}$	13 $\frac{5}{12}$	10 $\frac{2}{12}$	4,249	6	708.2
St. Louis—Toll.....	20	20	20	11 $\frac{6}{12}$	4,700	5	940.0
Kirkwood, Mo.....	(a)	58	30 $\frac{5}{12}$	13	22,934	45	509.6
Webster Groves, Mo.....	1st.....	17	17	10	2,975	5	595.0
St. Charles, Mo.....	2d.....	21	19	10	3,990	7	570.0
Clayton, Mo.....	1st.....	36	18	12 $\frac{6}{12}$	8,100	4	2,025.0
De Soto, Mo.....	2d.....	24 $\frac{3}{12}$	13 $\frac{3}{12}$	10	3,213	2	1,606.5
Farmington, Mo.....	2d.....	13 $\frac{6}{12}$	14 $\frac{6}{12}$	10 $\frac{6}{12}$	1,983	2	991.5
Poplar Bluff, Mo.....	2d.....	16 $\frac{6}{12}$	16 $\frac{6}{12}$	10 $\frac{6}{12}$	2,933	2	1,466.5
Troy, Mo.....	2d.....	18 $\frac{6}{12}$	12 $\frac{6}{12}$	10	2,276	2	1,135.0
Washington, Mo.....	1st.....	26	10	14	3,640	1	3,640.0
Wentzville, Mo.....	1st.....	20	16	10	3,200	1	3,200.0
Ferguson, Mo.....	1st.....	20	16	10	3,200	1	3,200.0
East St. Louis, Ill.:	3d.....	23 $\frac{6}{12}$	18 $\frac{6}{12}$	10 $\frac{1}{12}$	4,810	2	2,405.0
East.....	2d.....	96 $\frac{3}{12}$	36 $\frac{7}{12}$	13 $\frac{6}{12}$	47,535	17	2,796.2
Belleville, Ill.....	1st.....	37 $\frac{1}{12}$	48	12	21,600	8	2,700.0
Bell Telephone Co. of Pennsylvania:							
Philadelphia, Pa.:							
Market.....	4th.....	108 $\frac{3}{12}$	30 $\frac{8}{12}$	23 $\frac{6}{12}$	78,224	35	2,235.0
Chestnut Hill.....	2d.....	28	43 $\frac{1}{12}$	13 $\frac{6}{12}$	16,569	9	1,841.0
Kensington.....	2d.....	67 $\frac{3}{12}$	32 $\frac{3}{12}$	13 $\frac{1}{12}$	28,633	37	773.9
Walnut.....	5th.....	84	50 $\frac{6}{12}$	11 $\frac{6}{12}$	47,565	70	679.5
Locust.....	6th.....	54 $\frac{1}{12}$	48 $\frac{1}{12}$	11 $\frac{6}{12}$	29,848	44	678.4
Tioga.....	2d.....	91 $\frac{6}{12}$	31 $\frac{6}{12}$	13 $\frac{6}{12}$	38,493	41	938.9
Spruce.....	8th.....	48 $\frac{6}{12}$	53 $\frac{6}{12}$	15 $\frac{6}{12}$	40,093	51	786.1
Preston.....	2d.....	56 $\frac{6}{12}$	47 $\frac{6}{12}$	13	34,917	33	1,058.1
Woodland.....	1st.....	33 $\frac{6}{12}$	20	11 $\frac{6}{12}$	7,912	6	1,318.7
Belmont.....	2d.....	91 $\frac{6}{12}$	32	15	43,840	22	1,992.7
Germantown.....	2d.....	91 $\frac{6}{12}$	45 $\frac{6}{12}$	14 $\frac{6}{12}$	60,588	36	1,683.0
Toll Central Office.....	1st.....	89	36 $\frac{6}{12}$	15	49,061	38	1,291.1
Manayunk.....	7th.....	80 $\frac{6}{12}$	53 $\frac{6}{12}$	15 $\frac{6}{12}$	65,048	51	1,275.5
Lombard.....	1st.....	34	24 $\frac{6}{12}$	11 $\frac{6}{12}$	9,580	8	1,197.5
Frankford.....	2d.....	100	37 $\frac{6}{12}$	11 $\frac{6}{12}$	43,944	55	799.0
Filbert.....	4th.....	100	37 $\frac{6}{12}$	12 $\frac{6}{12}$	46,769	44	1,062.9
Oak Lane.....	2d.....	36 $\frac{3}{12}$	23 $\frac{6}{12}$	14 $\frac{1}{12}$	12,082	11	1,098.4
Poplar.....	6th.....	84	41 $\frac{6}{12}$	14	48,804	55	887.3
	1st.....	23 $\frac{6}{12}$	18 $\frac{6}{12}$	11 $\frac{6}{12}$	5,058	7	722.6
	2d.....	87	23	14 $\frac{1}{12}$	28,681	20	1,434.1
	4th.....	86 $\frac{6}{12}$	23 $\frac{6}{12}$	14	28,568	46	621.0

a Not reported.

TABLE II.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

A.—LOCATION AND SIZE OF OPERATING ROOMS AND AIR SPACE PER PERSON—Continued.

BELL TELEPHONE SYSTEM—Continued.

Company and exchange.	Floor on which located.	Operating rooms.				Maximum number of persons in room.	Cubic feet in room per person.
		Dimensions, in feet.					
		Length.	Width.	Height.	Cubic contents in cubic feet.		
Central District and Printing Telegraph Co.:							
Pittsburg, Pa.:							
Grant.....	7th.....	85 $\frac{1}{2}$	47	14	56,533	74	764.0
Oakdale.....	(a).....	15 $\frac{5}{8}$	12	10 $\frac{1}{2}$	1,896	2	948.0
Brady.....	1st.....	27 $\frac{7}{8}$	17 $\frac{8}{16}$	12 $\frac{5}{8}$	6,091	10	609.1
Toll office.....	7th.....	65 $\frac{5}{8}$	40 $\frac{8}{16}$	12 $\frac{5}{8}$	33,253	69	481.9
McKeesport, Pa.:	2d.....	49	30	12 $\frac{5}{8}$	18,375	17	1,080.9
Central Union Telephone Co.:							
Indianapolis, Ind.:							
Main.....	8th.....	92	23	14	29,624	50	1,209.6
	5th.....	76	29	14	30,856		
	6th.....	100	21	12	25,200		
Chesapeake and Potomac Telephone Co.:							
Baltimore, Md.:							
St. Paul.....	9th.....	160	30	12	57,600	80	720.0
Washington, D. C.:							
Main.....	6th.....	152	41	13	81,016	95	852.8
Lincoln.....	2d.....	104	30	13	40,560	22	1,843.6
West.....	2d.....	48	27 $\frac{2}{8}$	11 $\frac{1}{2}$	15,539	10	1,553.9
North.....	4th.....	120 $\frac{1}{2}$	40 $\frac{5}{8}$	14 $\frac{1}{2}$	69,661	50	1,393.2
Columbia.....	2d.....	101 $\frac{1}{2}$	35	12 $\frac{1}{2}$	45,665	16	2,854.1
Chicago Telephone Co.:							
Chicago, Ill.:							
Main.....	8th.....	87	77	16	107,184	202	646.3
	7th.....	38	41	15	23,370		
	2d, main.....	48	58	13 $\frac{5}{8}$	38,048		
Oakland.....	2d, annex.....	46	28	13 $\frac{5}{8}$	17,603	125	445.2
	7th, main.....	79	28	10 $\frac{5}{8}$	22,489		
	7th, 1st "L".....	65	30 $\frac{6}{8}$	10 $\frac{5}{8}$	20,155		
Harrison.....	7th, 2d "L".....	65	33	10 $\frac{5}{8}$	21,808	160	402.8
	2d.....	45 $\frac{5}{8}$	41 $\frac{6}{8}$	12	22,659		
	2d.....	96 $\frac{1}{2}$	33 $\frac{1}{2}$	11	35,298		
Central.....	3d.....	58 $\frac{1}{2}$	38	11	24,523	242	247.2
	7th.....	156	29 $\frac{1}{2}$	15 $\frac{1}{2}$	70,165		
	1st.....	69	31	15	32,085		
Evanston, Ill.:	2d.....	40 $\frac{1}{2}$	16 $\frac{6}{8}$	12	8,019	11	729.0
Waukegan, Ill.:	2d.....	42	35	15	22,050	18	1,225.0
Cincinnati and Suburban Bell Telephone Co.:							
Cincinnati, Ohio:							
Canal.....	3d.....	86 $\frac{1}{2}$	74 $\frac{7}{8}$	18	116,126	65	1,786.6
Canal toll board.....	2d.....	21	63	14 $\frac{8}{16}$	19,404	12	1,617.0
North.....	2d.....	111 $\frac{3}{4}$	25 $\frac{8}{16}$	16	45,652	57	800.9
Citizens Telephone Co.:							
Covington, Ky.:							
South.....	2d.....	76 $\frac{1}{2}$	39 $\frac{3}{4}$	18	53,933	28	1,926.2
Cleveland Telephone Co.:							
Cleveland, Ohio:							
Main, local.....	6th.....	76	39	18 $\frac{8}{16}$	55,328	75	737.7
Main, suburban.....	6th.....	38 $\frac{5}{8}$	18	8 $\frac{1}{2}$	5,833	14	416.6
Colorado Telephone Co.:							
Denver, Colo.:							
Main.....	4th.....	120	23	14 $\frac{1}{2}$	40,940	101	405.3
Main, toll.....	4th.....	120	18	14 $\frac{1}{2}$	32,040	36	890.0
Cumberland Telephone and Telegraph Co.:							
Louisville, Ky.:							
Main.....	2d.....	100	25	15	37,500	33	1,136.4
Nashville, Tenn.:							
Main.....	3d.....	93	29	15 $\frac{1}{2}$	41,129	53	776.0
New Orleans, La.:							
Main.....	4th.....	64	46	12	35,328	72	490.7

a Not reported.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

A.—LOCATION AND SIZE OF OPERATING ROOMS AND AIR SPACE PER PERSON—Continued.

BELL TELEPHONE SYSTEM—Continued.

Company and exchange.		Operating rooms.				Maximum number of persons in room.	Cubic feet in room per person.	
		Floor on which located.	Dimensions, in feet.					
			Length.	Width.	Height.			Cubic contents in cubic feet.
Missouri and Kansas Telephone Co.:								
Kansas City, Mo.:								
Grand.....	2d.....	75	28	13	27,300	27	1,011.1	
Main.....	4th.....	130	18	11	25,740	46	559.6	
	5th.....	65	18	11	12,870	12	1,072.5	
	5th.....	65	18	11	12,870	25	514.8	
Fairmount.....	1st.....	15 ⁶ / ₁₂	9 ⁶ / ₁₂	9	1,283	4	320.8	
Armstrong, Mo.....	2d.....	15 ⁶ / ₁₂	12 ⁶ / ₁₂	10	1,938	(a)	(a)	
Merriam, Kans.....	1st.....	11	12	7 ¹ / ₁₂	1,001	(a)	(a)	
Topeka, Kans.....	2d.....	76	23 ⁶ / ₁₂	10	17,860	16	1,116.3	
Wellington, Kans.:								
Local.....	2d.....	50	20	14	14,000	3	4,666.7	
Toll.....	2d.....	27	20 ^a	14	7,560	2	3,780.0	
Nebraska Telephone Co.:								
Omaha, Nebr.:								
Douglas.....	3d.....	63	63	15 ⁶ / ₁₂	61,520	113	544.4	
New York Telephone Co.:								
New York, N. Y.:								
Cortland local.....	"A" board.....	9th.....	100	58	14	81,200	183	887.4
	"B" board.....	9th.....	100	58	14	81,200		
Harlem.....	"A" board.....	3d.....	90	33 ⁶ / ₁₂	13	39,195	78	1,005.0
	"B" board.....	3d.....	90	33 ⁶ / ₁₂	13	39,195		
Melrose local.....	"A" board.....	3d.....	88	34	13	38,896	71	1,095.7
	"B" board.....	3d.....	88	34	13	38,896		
"79" street.....	"A" board.....	3d.....	82	35	14	40,180	89	780.2
	"B" board.....	4th.....	95	22	14	29,260		
Plaza.....	"A" board.....	4th.....	89	37	14	46,102	102	904.0
	"B" board.....	4th.....	89	37	14	46,102		
Columbus.....	"A" board.....	3d.....	85	68	13	75,140	120	1,252.3
	"B" board.....	3d.....	85	68	13	75,140		
"38" street.....	"A" board.....	6th.....	80	48	13	49,920	136	734.1
	"B" board.....	6th.....	80	48	13	49,920		
Madison Square.....	"A" board.....	3d.....	79	35	13	35,945	125	575.1
	"B" board.....	4th.....	79	35	13	35,945		
Bryant.....	"A" board.....	3d.....	80	48	13	49,920	100	817.7
	"B" board.....	4th.....	70	35	13	31,850		
Chelsea.....	"A" board.....	6th.....	84	82	13	89,544	98	1,827.4
	"B" board.....	6th.....	84	82	13	89,544		
Tremont.....	"A" board.....	3d.....	89	27	13	31,239	39	1,602.0
	"B" board.....	3d.....	89	27	13	31,239		
Westchester.....	"A" board.....	3d.....	31	13	9	3,627	6	1,209.0
	"B" board.....	3d.....	31	13	9	3,627		
Kingsbridge.....	"A" board.....	1st.....	51	26	8	10,608	6	3,536.0
	"B" board.....	1st.....	51	26	8	10,608		
City Island.....	"A" board.....	2d.....	11	7	9	693	2	693.0
	"B" board.....	2d.....	11	7	9	693		
Williamsbridge.....	"A" board.....	1st.....	29	21	11	6,699	6	2,233.0
	"B" board.....	1st.....	29	21	11	6,699		
Morningside.....	"A" board.....	4th.....	98	36	14	49,392	117	844.3
	"B" board.....	4th.....	98	36	14	49,392		
Riverside.....	"A" board.....	3d.....	80	45	13	46,800	163	574.2
	"B" board.....	3d.....	80	45	13	46,800		
Audubon.....	"A" board.....	3d.....	95	42 ⁶ / ₁₂	13	52,488	73	1,438.0
	"B" board.....	3d.....	95	42 ⁶ / ₁₂	13	52,488		
Broad.....	"A" board.....	6th.....	97	25 ⁶ / ₁₂	13	32,156	148	391.0
	"B" board.....	5th.....	92	21 ⁶ / ₁₂	13	25,714		
Franklin.....	"A" board.....	7th.....	92	40	13	47,840	95	1,007.2
	"B" board.....	7th.....	92	40	13	47,840		
Worth.....	"A" board.....	2d.....	92	36	13	43,056	86	849.8
	"B" board.....	4th.....	70	33	13	30,030		

a Not reported.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

A.—LOCATION AND SIZE OF OPERATING ROOMS AND AIR SPACE PER PERSON—Continued.

BELL TELEPHONE SYSTEM—Concluded.

Company and exchange.	Floor on which located.	Operating rooms.				Maximum number of persons in room.	Cubic feet in room per person.
		Dimensions, in feet.			Cubic contents in cubic feet.		
		Length.	Width.	Height.			
New York Telephone Co.—Concluded.							
New York, N. Y.—Concluded.							
Orchard.....	"A" board.. 3d.....	70	52	14	50,960	87	1,171.5
	"B" board.. 3d.....	70	52	14	50,960		
Spring.....	"A" board.. 4th.....	95	77 $\frac{3}{4}$	14	102,743	156	1,317.2
	"B" board.. 4th.....	95	77 $\frac{3}{4}$	14	102,743		
Stuyvesant.....	"A" board.. 2d.....	90	36	13	42,120	68	1,238.8
	"B" board.. 2d.....	90	36	13	42,120		
Gramercy.....	"A" board.. 6th.....	92	40	14	51,520	109	945.3
	"B" board.. 6th.....	92	40	14	51,520		
John.....	"A" board.. 8th.....	79	56	12	53,088	125	849.4
	"B" board.. 8th.....	79	56	12	53,088		
Rector.....	"A" board.. 5th.....	100	58	13	75,400	128	1,178.1
	"B" board.. 5th.....	100	58	13	75,400		
Beekman.....	"A" board.. 2d.....	78	65	12	60,840	93	1,073.3
	"B" board.. 4th.....	74	43	12 $\frac{1}{2}$	38,980		
Northwestern Telephone Exchange Co.:							
Minneapolis, Minn.:							
Main.....	3d.....	78 $\frac{4}{12}$	38 $\frac{6}{12}$	10 $\frac{5}{12}$	31,415	48	654.5
Toll office.....	(a)	74 $\frac{1}{2}$	33	14	34,535	48	719.5
St. Paul, Minn.:							
Cedar.....	2d.....	51 $\frac{6}{12}$	42 $\frac{2}{12}$	24	52,118	56	930.7
Red Wing, Minn.....	2d.....	25	15	10 $\frac{5}{12}$	3,938	5	787.6
Anoka, Minn.....	2d.....	16	15	10	2,400	5	480.0
Fargo, N. Dak.....	2d.....	71 $\frac{1}{2}$	26	14	26,147	25	1,045.9
Sioux Falls, S. Dak.....	(a)	35	27	10	9,450	14	675.0
Ozark Bell Telephone Co.:							
Springfield, Mo.....	3d.....	58 $\frac{4}{12}$	28 $\frac{6}{12}$	12 $\frac{2}{12}$	20,227	20	1,011.4
Aurora, Mo.....	2d.....	26	16	12	4,992	3	1,664.0
Republic, Mo.....	1st.....	30	10	9	2,700	1	2,700.0
Pacific Telephone and Telegraph Co.:							
Los Angeles, Cal.:							
Main.....	2d.....	76	36	14	38,304	108	354.7
Portland, Oreg.:							
Main.....	2d.....	40	37	14	20,720	22	941.8
	3d.....	97	37	14	50,246	92	546.2
	2d.....	37	19	14	9,842	12	820.2
San Francisco, Cal.:							
Main (Douglas).....	5th.....	117	38	14	62,244	56	1,111.5
Main (Kearny).....	7th.....	117	38	14	62,244	87	715.4
Main (toll).....	3d.....	117	38	14	62,244	35	1,778.4
Seattle, Wash.:							
Main.....	3d.....	107	46	15	73,830	92	802.5
Rocky Mountain Bell Telephone Co.:							
Salt Lake City, Utah:							
Main, front toll.....	5th.....	40	50	12 $\frac{2}{12}$	24,333	12	2,027.8
Main, back toll.....	5th.....	114 $\frac{9}{12}$	50	12 $\frac{2}{12}$	69,806	50	1,396.1
Southern Bell Telephone and Telegraph Co.:							
Atlanta, Ga.:							
Main, local.....	3d.....	117 $\frac{1}{2}$	27 $\frac{4}{12}$	15 $\frac{4}{12}$	49,385	53	931.8
Main, long distance.....	3d.....	44 $\frac{1}{2}$	25 $\frac{2}{12}$	15 $\frac{4}{12}$	17,140	36	476.1
Ivy.....	2d.....	103 $\frac{6}{12}$	33 $\frac{2}{12}$	12 $\frac{2}{12}$	44,054	30	1,468.5
Birmingham, Ala.:							
Main.....	2d.....	137	28	(a)	(a)	35	(a)
Main.....	5th.....	69	28	(a)	(a)	18	(a)
Richmond, Va.:							
Richmond.....	3d.....	75	45	13	43,875	65	675.0
Southwestern Telegraph and Telephone Co.:							
Dallas, Tex.:							
Main.....	2d.....	72	72	13 $\frac{1}{2}$	71,280	58	1,229.0
Main.....	4th.....	38 $\frac{1}{2}$	29 $\frac{1}{12}$	13	14,682	13	1,129.4

(a) Not reported.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.**A.—LOCATION AND SIZE OF OPERATING ROOMS AND AIR SPACE PER PERSON—Concluded.****INDEPENDENT TELEPHONE COMPANIES.**

Company and exchange.	Operating rooms.						Cubic feet in room per person.
	Floor on which located.	Dimensions, in feet.				Maximum number of persons in room.	
		Length.	Width.	Height.	Cubic contents in cubic feet.		
Kansas City Home Telephone Co: Kansas City, Mo.:							
Main	3d.....	91 ^{$\frac{3}{12}$}	40 ^{$\frac{1}{12}$}	17	62,350	108	577.3
East.....	2d.....	50	37 ^{$\frac{3}{12}$}	15	28,000	35	800.0
Lenwood.....	2d.....	50	37 ^{$\frac{3}{12}$}	15	28,000	16	1,750.0
South.....	2d.....	50	37 ^{$\frac{3}{12}$}	15	28,000	31	903.2
West.....	2d.....	50	37 ^{$\frac{3}{12}$}	15	28,000	19	1,473.7
Baltimore avenue.....	2d.....	33 ^{$\frac{3}{12}$}	22 ^{$\frac{7}{12}$}	13	9,835	27	364.3
Keystone Telephone Co.:							
Philadelphia, Pa.:							
Main.....	5th.....	88	46	19	76,912	68	1,131.1
Race.....	4th.....	117	39	20	91,260	58	1,573.4
Park.....	2d.....	94	38	16	57,152	28	2,041.1
North.....	2d.....	77	30	16	36,960	4	9,240.0
West.....	2d.....	77	30	16	36,960	17	2,174.1
East.....	2d.....	77	30	16	36,960	10	3,696.0
Louisville Home Telephone Co.:							
Louisville, Ky.:							
Central.....	3d.....	90	48	18	77,760	75	1,036.8
Anchorage.....	2d.....	15	15	(a)	(a)	(a)	(a)
Maryland Telephone Co.:							
Baltimore, Md.:							
Courtland.....	7th.....	70	30	14	29,400	45	653.3
Druid Hill.....	1st.....	80	40	16	51,200	(a)	(a)

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

American Telephone and Telegraph Co.:							
Boston, Mass.	7th	64	48	$10\frac{6}{12}$	32,257	50	645.1
Chicago, Ill.	1st	$50\frac{6}{12}$	27	$11\frac{1}{12}$	17,925	72	249.0
Cincinnati, Ohio	4th	$35\frac{9}{12}$	$21\frac{1}{12}$	$13\frac{3}{12}$	9,924	25	397.0
Kansas City, Mo.	5th	112	(a)	$10\frac{3}{12}$	(a)	6	Ample.
Minneapolis, Minn.	1st	$74\frac{9}{12}$	33	14	34,535	48	719.5
		$67\frac{9}{12}$	$17\frac{9}{12}$	11	13,245		
New York, N. Y.	7th	$100\frac{6}{12}$	$20\frac{9}{12}$	11	23,031	180	470.5
		$100\frac{6}{12}$	$21\frac{6}{12}$	11	23,768		
		112	20	11	24,640		
Philadelphia, Pa.	7th	129	$40\frac{1}{12}$	$14\frac{3}{12}$	74,775	60	1,246.3
Pittsburg, Pa.	5th	63	46	14	40,572	36	1,127.0
St. Louis, Mo.	2d.	58	$30\frac{4}{12}$	$13\frac{5}{12}$	23,604	42	562.0

(a) Not reported.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECI
OF THE COMPA

B.—TIME ALLOWANCE FOR HANDLING CALLS, PLUG CONNECTIONS PER HOUR, LENGTH OF OVERTIME DAY AND THE RATE PAID, MINIMUM AGE OF EMPLOYEES, AND WAGES AT BEGINNING WORK.

BELL TELEPHONE SYSTEM.

Name of company.	City.	Kinds of calls handled.	
		Local.	Toll.
Bell Telephone Co. of Missouri.....	St. Louis, Mo.....	Yes.	Yes.
Bell Telephone Co. of Pennsylvania.....	Philadelphia, Pa.....	Yes.	Yes.
Central District and Printing Telegraph Co.....	Pittsburg, Pa.....	Yes.	Yes.
Central Union Telephone Co.....	Indianapolis, Ind.....	Yes.	Yes.
Chesapeake and Potomac Telephone Co.....	Baltimore, Md.....	Yes.	Yes.
Do.....	Washington, D. C.....	Yes.	Yes.
Chicago Telephone Co.....	Chicago, Ill.....	Yes.	Yes.
Cincinnati and Suburban Bell Telephone Co.....	Cincinnati, Ohio.....	Yes.	No..
Citizens Telephone Co.....	Covington, Ky.....	Yes.	No..
Cleveland Telephone Co.....	Cleveland, Ohio.....	Yes.	Yes.
Colorado Telephone Co.....	Denver, Colo.....	Yes.	Yes.
Cumberland Telephone and Telegraph Co.....	Louisville, Ky.....	Yes.	Yes.
Do.....	Nashville, Tenn.....	Yes.	Yes.
Do.....	New Orleans, La.....	Yes.	Yes.
Missouri and Kansas Telephone Co.....	Kansas City, Mo.....	Yes.	Yes.
Do.....	Armstrong, Mo.....	Yes.	Yes.
Do.....	Topeka, Kans.....	Yes.	Yes.
Do.....	Wellington, Kans.....	Yes.	Yes.
Nebraska Telephone Co.....	Omaha, Nebr.....	Yes.	Yes.
New England Telephone and Telegraph Co.....	Boston, Mass.....	Yes.	Yes.
New York Telephone Co.....	New York, N. Y.....	Yes.	Yes.
Northwestern Telephone Exchange Co.....	Minneapolis, Minn.....	Yes.	Yes.
Do.....	St. Paul, Minn.....	Yes.	No..
Do.....	Fargo, N. Dak.....	Yes.	Yes.
Do.....	Sioux Falls, S. Dak.....	Yes.	Yes.
Do.....	Red Wing, Minn.....	Yes.	Yes.
Do.....	Anoka, Minn.....	Yes.	Yes.
Ozark Bell Telephone Co.....	Springfield, Mo.....	Yes.	Yes.
Do.....	Aurora, Mo.....	Yes.	Yes.
Do.....	Republic, Mo.....	Yes.	Yes.
Pacific Telephone and Telegraph Co.....	Los Angeles, Cal.....	Yes.	Yes.
Do.....	Portland, Oreg.....	Yes.	Yes.
Do.....	San Francisco, Cal.....	Yes.	Yes.
Do.....	Seattle, Wash.....	Yes.	Yes.
Rocky Mountain Bell Telephone Co.....	Salt Lake City, Utah.....	Yes.	Yes.
Southern Bell Telephone and Telegraph Co.....	Atlanta, Ga.....	Yes.	No..
Do.....	Birmingham, Ala.....	Yes.	Yes.
Do.....	Richmond, Va.....	Yes.	Yes.
Southwestern Telegraph and Telephone Co.....	Dallas, Tex.....	Yes.	Yes.

^a Number 101 method.

^b No regulation.

^c Two hours in excess of normal day.

^d Seventy per cent of calls within 4 seconds, 30 per cent within 12 seconds.

^e Required to handle calls without delay.

^f Seventy per cent of calls within 10 seconds, 30 per cent within 20 seconds.

^g Not reported.

^h Five seconds in "Lincoln" exchange.

ⁱ Two seconds in "Lincoln" exchange.

^j Three seconds in "Main" and "Lincoln" exchanges.

^k Three seconds in "Main" exchange.

^l Five hundred in "North" exchange.

^m From 3 to 4 seconds in the exchanges at Waukegan, Evanston, and Aurora.

ⁿ In the toll exchange, 17 cents per hour; in all other Chicago exchanges, 16 cents per hour; in out of town exchanges, \$20 per month.

^o Pay 16½ cents per hour for overtime.

^p Fourteen tickets straight ring-down operating.

^q Twelve for those whose usual hours are 10 per day, and 9 for those whose usual hours are 4½ per day, exclusive of time allowed for lunch.

FIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS
NIES—Continued.B.—TIME ALLOWANCE FOR HANDLING CALLS, PLUG CONNECTIONS PER HOUR,
LENGTH OF OVERTIME DAY AND* THE RATE PAID, MINIMUM AGE OF EMPLOYEES,
AND WAGES AT BEGINNING WORK.

BELL TELEPHONE SYSTEM.

Time allowed for handling calls (seconds).						Efficiency number of plug connections per hour.			Maxi- mum length of over- time day (hrs.).	Per cent of regu- lar rate paid for over- time work.	Mini- mum age at which appli- cants are accept- ed.	Wages paid at begin- ning work.
“A” board.		“B” board.		Toll board.		“A” opera- tor.	“B” opera- tor.	Toll calls.				
Con- nec- tion.	Dis- con- nec- tion.	Con- nec- tion.	Dis- con- nec- tion.	Con- nec- tion.	Dis- con- nec- tion.							
8	2	2	2	2	3	150	300	a 24	15	100	17	\$20.00 m.
4	5	3	3	10	5	60-150	200-400	30	12	100	16	.81 d.
4	4	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(c)	100	16	.80 d.
(d)	(d)	(e)	(e)	(f)	(f)	200	350	(b)	13	100	16	20.00 m.
3	(g)	3	(g)	4	(g)	150	300	(b)	10	150	16	4.00 w.
h 4	h 3	h 5	3	10	k 5	150	h 450	30	10	150	17	4.00 w.
m 4-5	(g)	m 4-5	(g)	(g)	(g)	(g)	(g)	(g)	11	100	16	(n)
3.8	5	2.5	5	5.6	7.5	103	293	68	10.5	100	18	15.00 m.
3.8	5	2.5	5	5.6	7.5	103	293	68	10.5	100	18	15.00 m.
3.8	3.8	2	2	6	3.8	100	250	30	11.25	(o)	18	20.00 m.
10	10	10	10	20	20	(b)	(b)	(b)	10	200	16	25.00 m.
5	6	2	4	15	15	225	400	(p)	(q)	(r)	17	12.00 m.
5	6	2	4	15	15	225	400	(s)	h 12	(r)	17	15.00 m.
5	6	2	4	15	15	225	400	(s)	u 13	(r)	17	12.50 m.
4	3	2	(g)	2	(g)	212	300	(b)	11.6	100	16	15.00 m.
4	3	(g)	(g)	(g)	(g)	212	(g)	(g)	(g)	100	16	(g)
4	3	2	(g)	2	(g)	212	300	(b)	12	100	16	17.50 m.
4	3		2	(g)	(g)	212	(b)	(g)	100	16	17.50 m.	
4	3	(b)	(b)	(b)	(b)	(b)	(b)	(b)	11.5	125	16	20.00 m.
4	3	(g)	3	17	(g)	180	300	(v)	12	150	17	5.50 w.
3.4	3.8	(g)	(g)	3.3	2.7	210	400-460	50	(w)	100	16	5.00 w.
8	(b)	(b)	(b)	30	15	(b)	(b)	(b)	x 11	(y)	16	20.00 m.
(b)	(b)	(b)	(b)			(b)	(b)		11	(z)	16	20.00 m.
(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	11	100	16	(aa)
(b)	(b)			(b)	(b)	(b)		(b)	11	100	16	18.00 m.
(b)	(b)			(b)	(b)	(b)		(b)	11	100	16	15.00 m.
(b)	(b)			(b)	(b)	(b)		(b)	11	100	16	18.00 m.
(b)	(b)			(b)	(b)	(b)		(b)	11	100	16	15.00 m.
4	3	(g)	(g)	2	(g)	212	(g)	(b)	12	100	16	20.00 m.
4	3			2	(g)	212		(g)	8.5	(bb)	16	15.00 m.
5	3		(g)	(g)	(g)	150		(g)	(cc)		16	20.00 m.
11	5	5	3	(dd)	(dd)	150	200	(ee)	12	150	16	1.00 d.
11	3	5	3	(dd)	(dd)	150	200	(ee)	12	150	16	1.00 d.
11	3	5	3	(dd)	(dd)	150	200	(ee)	12	150	16	1.00 d.
11	3	5	3	(dd)	(dd)	150	200	(ee)	12	150	16	1.00 d.
4	3.5	2	3	5	10	400	600	ff 17	12	150	17	12 h.
4.5	3	1	1	4.5	1	117-285	300-500	-----	12.5	150	16	17.50 m.
5	5	(g)	(g)	12	5	(b)	(b)	(b)	13.5	(gg)	16	17.50 m.
4.5	3	1	1	4.5	1	117-340	300-500	45	14.5	h 150	15	20.00 m.
10	(g)	3	(g)	15	(g)	200	400	14	12	100	18	20.00 m.

r Pay 10 cents per hour for overtime.

s Fourteen tickets on ring-down operating.

t Not including 2 hours allowed for dinner and lunch.

u Not including reliefs.

v Fifteen good tickets, two-ticket method.

w No limit.

z Eleven hours and 20 minutes in the toll exchange.

* Not reported except for the toll exchange where the rate for overtime is the same as that for the regular hours.

z Pay \$1 per day for overtime.

aa For local, \$18 per month; for toll operators, \$20.00 per month.

bb Not paid for overtime.

cc No overtime.

dd Recording operator answer, 15 seconds. To complete recording, 30 seconds.

ee Ten tickets.

ff Measured by number of messages handled.

gg Pay 15 cents per hour for overtime.

hh Allowed lunch also, if overtime amounts to 2 hours or more.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECI
OF THE COMPAB.—TIME ALLOWANCE FOR HANDLING CALLS, PLUG CONNECTIONS PER HOUR,
LENGTH OF OVERTIME DAY AND THE RATE PAID, MINIMUM AGE OF EMPLOYEES,
AND WAGES AT BEGINNING WORK—Concluded.

INDEPENDENT TELEPHONE COMPANIES.

Name of company.	City.	Kinds of calls handled.		
		Local.	Toll.	Long distance.
Kansas City Home Telephone Co.	Kansas City, Mo.	Yes.	Yes.	.....
Keystone Telephone Co. of Philadelphia.	Philadelphia, Pa.	Yes.	Yes.	.....
Louisville Home Telephone Co.	Louisville, Ky.	Yes.	Yes.	.....
Maryland Telephone Co.	Baltimore, Md.	Yes.	Yes.	.....

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

American Telephone and Telegraph Co.	Boston, Mass.	No.	No.	Yes.
Do.	Chicago, Ill.	No.	No.	Yes.
Do.	Cincinnati, Ohio.	No.	No.	Yes.
Do.	Kansas City, Mo.	No.	No.	Yes.
Do.	Minneapolis, Minn.	No.	No.	Yes.
Do.	New York, N. Y.	No.	No.	Yes.
Do.	Philadelphia, Pa.	No.	No.	Yes.
Do.	Pittsburg, Pa.	No.	No.	Yes.
Do.	St. Louis, Mo.	No.	No.	Yes.

^a Not reported.^b Pay 10 cents per hour for overtime.^c Fifteen in exceptional cases.^d Not applicable.

FIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS NIES—Continued.

B.—TIME ALLOWANCE FOR HANDLING CALLS, PLUG CONNECTIONS PER HOUR, LENGTH OF OVERTIME DAY AND THE RATE PAID, MINIMUM AGE OF EMPLOYEES, AND WAGES AT BEGINNING WORK—Concluded.

INDEPENDENT TELEPHONE COMPANIES.

Time allowed for handling calls (seconds).						Efficiency number of plug connections per hour.			Maximum length of over-time day (hrs.).	Per cent of regular rate paid for over-time work.	Minimum age at which applicants are accepted.	Wages paid at beginning work.
“A” board.		“B” board.		Toll board.								
Connection.	Disconnection.	Connection.	Disconnection.	Connection.	Disconnection.	“A” operator.	“B” operator.	Toll calls.				
21. 4-24. 1	2. 5	23. 4-27. 7	2. 5	3 min.	15. 0	140-180	350	170	10. 0	100	16	\$20.00 m.
6	3. 0	8	3. 0	20. 0	5. 0	200	300	20	10. 0	100	18	. 10 h.
3	2. 5	(a)	2. 5	(a)	(a)	200	300	(a)	11. 5	(b)	16	12. 00 m.
5	(a)	(a)	(a)	5	(a)	275	350	(a)	10. 5	100	c 16	. 07 h.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

(d)	(d)	(d)	(d)	(d)	(d)	(e)	(e)	(e)	11	(f)	18	\$25. 00 M.
(d)	(d)	(d)	(d)	(d)	(d)	(e)	(e)	(e)	11	(f)	16	25. 00 M.
(d)	(d)	(d)	(d)	(d)	(d)	(e)	(e)	(e)	11	(f)	18	22. 50 M.
(d)	(d)	(d)	(d)	(d)	(d)	(e)	(e)	(e)	12	(f)	17	25. 00 M.
(d)	(d)	(d)	(d)	(d)	(d)	(e)	(e)	(e)	14	(f)	18	25. 00 M.
(d)	(d)	(d)	(d)	(d)	(d)	(e)	(e)	(e)	12	(f)	17	25. 00 M.
(d)	(d)	(d)	(d)	(d)	(d)	(e)	(e)	(e)	9. 5	(f)	17	20. 00 M.
(d)	(d)	(d)	(d)	(d)	(d)	(e)	(e)	(e)	9	(f)	17	20. 00 M.
(d)	(d)	(d)	(d)	(d)	(d)	(e)	(e)	(e)	12	(f)	17	25. 00 M.

^e No regulation.

^f Special payments to cover cost of meals and other expenses; overtime not permitted except in occasional emergencies; compensated for by additional time off.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECI
OF THE COMPAC.—SHIFTS REQUIRED, COMPANIES PROVIDING NIGHT ALARMS AND IN WHICH
OVERTIME WORK IS OPTIONAL, AND HOLIDAYS AND VACATIONS GRANTED.

BELL TELEPHONE SYSTEM.

Company.	City.	Does company require—		
		Split- trick work?	Even- ing work?	Night work?
Bell Telephone Co. of Missouri	St. Louis, Mo.	Yes.	Yes.	Yes.
Bell Telephone Co. of Pennsylvania	Philadelphia, Pa.	Yes.	Yes.	Yes.
Central District and Printing Telegraph Co.	Pittsburg, Pa.	Yes.	Yes.	Yes.
Central Union Telephone Co.	Indianapolis, Ind.	Yes.	Yes.	Yes.
Chesapeake and Potomac Telephone Co.	Baltimore, Md.	Yes.	Yes.	Yes.
Do.	Washington, D. C.	Yes.	Yes.	Yes.
Chicago Telephone Co.	Chicago, Ill.	Yes.	Yes.	Yes.
Cincinnati and Suburban Bell Telephone Co.	Cincinnati, Ohio.	No.	No.	No.
Citizens Telephone Co.	Covington, Ky.	No.	No.	No.
Cleveland Telephone Co.	Cleveland, Ohio.	Yes.	Yes.	No.
Colorado Telephone Co.	Denver, Colo.	Yes.	Yes.	No.
Cumberland Telephone and Telegraph Co.	Louisville, Ky.	No.	Yes.	Yes.
Do.	Nashville, Tenn.	Yes.	No.	Yes.
Do.	New Orleans, La.	Yes.	No.	Yes.
Missouri and Kansas Telephone Co.	Kansas City, Mo.	Yes.	Yes.	Yes.
Do.	Armstrong, Mo.	Yes.	Yes.	Yes.
Do.	Topeka, Kans.	No.	No.	No.
Do.	Wellington, Kans.	(t)	(t)	(t)
Nebraska Telephone Co.	Omaha, Nebr.	Yes.	Yes.	Yes.
New England Telephone and Telegraph Co.	Boston, Mass.	Yes ^g	Yes ^r	Yes ^t
New York Telephone Co.	New York, N. Y.	Yes.	Yes.	Yes.
Northwestern Telephone Exchange Co.	Minneapolis, Minn.	Yes.	Yes.	No.
Do.	St. Paul, Minn.	Yes.	Yes.	No.
Do.	Fargo, N. Dak.	Yes.	Yes.	No.
Do.	Sioux Falls, S. Dak.	Yes.	Yes.	No.
Do.	Red Wing, Minn.	Yes.	Yes.	No.
Do.	Anoka, Minn.	Yes.	Yes.	No.
Ozark Bell Telephone Co.	Springfield, Mo.	Yes.	Yes.	Yes.
Do.	Aurora, Mo.	Yes.	Yes.	Yes.
Do.	Republic, Mo.	Yes.	Yes.	Yes.
Pacific Telephone and Telegraph Co.	Los Angeles, Cal.	Yes.	Yes.	Yes.
Do.	Portland, Oreg.	Yes.	Yes.	Yes.
Do.	San Francisco, Cal.	Yes.	Yes.	Yes.
Do.	Seattle, Wash.	Yes.	Yes.	Yes.
Rocky Mountain Bell Telephone Co.	Salt Lake City, Utah.	Yes.	No.	Yes.
Southern Bell Telephone and Telegraph Co.	Atlanta, Ga.	Yes.	No.	Yes.
Do.	Birmingham, Ala.	No.	No.	No.
Do.	Richmond, Va.	Yes.	Yes.	Yes.
Southwestern Telegraph and Telephone Co.	Dallas, Tex.	Yes.	Yes.	Yes.

^a Operators and supervisors. From October to May, operators are excused at 3 p. m.^b For chief operators only.^c Two each month.^d For those employed one year or more.^e Supervisors and chief operators allowed half holiday once a month; one-third of operators allowed half holiday per month for good service.^f Vacation allowed. Not reported as to whether or not pay is allowed.^g Operators have half holiday every third Saturday; employees of higher rank, every second Saturday.^h Operators one week if with the company prior to March 1 of current year; chief operators, two weeks.ⁱ In addition to one week's vacation with pay, one week is allowed without pay if requested.^j Hourly employees.^k Monthly employees.^l Ten days.

FIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS
NIES—Continued.C.—SHIFTS REQUIRED, COMPANIES PROVIDING NIGHT ALARMS AND IN WHICH
OVERTIME WORK IS OPTIONAL, AND HOLIDAYS AND VACATIONS GRANTED.

BELL TELEPHONE SYSTEM.

Does company provide night alarm?	Is over-time work optional?	Are Saturday half holidays granted—		Are vacations allowed—				Are applicants paid while in training?
		All year?	Summer months only?	With pay—		Without pay—		
				One week?	Two weeks?	One week?	Two weeks?	
Yes.....	Yes.....		Yes.....	Yes (a)...	Yes (b)...			Yes.
Yes.....	Yes.....	Yes (c)...		Yes (d)...				Yes.
Yes.....	No.....	(e).....			(f).....		(f).....	Yes.
Yes.....	No.....	No.....	No.....	Yes.....				Yes.
Yes.....	Yes.....	Yes (g)...		Yes (h)...	Yes (h)...			Yes.
Yes.....	Yes.....	Yes.....		Yes.....		Yes (i)...		Yes.
Yes.....	No.....	Yes.....		Yes (j)...	Yes (k)...			Yes.
Yes.....	Yes.....	No.....	Yes.....	Yes.....				Yes.
Yes.....	Yes.....	No.....	Yes.....	Yes.....				Yes.
Yes.....	No.....	No.....	No.....	Yes (l)...				Yes.
Yes.....	Yes.....	(m).....		Yes (n)...	Yes (n)...			Yes.
No.....	Yes (o)...	No.....	No.....	Yes.....				Yes.
No.....	No.....	No.....	No.....	Yes.....				Yes (p)
No.....	No.....	No.....	No.....	Yes.....				Yes.
Yes.....	No.....	Yes (q)...			Yes (r)...			Yes.
Yes.....	Yes.....	No.....	No.....	(s).....		(s).....		No.
Yes.....	Yes.....	No.....	No.....	Yes.....				Yes.
Yes.....	No.....	No.....	No.....	Yes.....				No.
Yes.....	Yes.....	No.....	No.....	(u).....	(u).....	(u).....		Yes.
Yes.....	Yes.....	No.....	No.....	Yes (t)...				Yes.
Yes.....	No.....	Yes.....		Yes.....				Yes.
Yes.....	No.....	No.....	No.....	(w).....		(w).....		Yes.
Yes.....	No.....	No.....	No.....	(w).....		(w).....		Yes.
Yes.....	No.....	No.....	No.....	(w).....		(w).....		No.
Yes.....	No.....	No.....	No.....	(w).....		(w).....		No.
Yes.....	No.....	No.....	No.....	(w).....		(w).....		No.
Yes.....	No.....	No.....	No.....	(f).....				No.
Yes.....	No.....	No.....	No.....	(f).....				No.
Yes.....	(t).....	No.....	No.....	No.....	No.....	No.....	No.....	No.
Yes.....	No.....	No.....	No.....	Yes.....				Yes.
Yes.....	No.....	No.....	No.....	Yes.....				Yes.
Yes.....	No.....	No.....	No.....	Yes.....				Yes.
Yes.....	Yes.....	No.....	No.....	Yes.....				Yes.
Yes.....	No.....	No.....	No.....	Yes.....				Yes.
Yes.....	No.....	No.....	No.....	(s).....		(s).....		Yes.
Yes.....	Yes.....	No.....	No.....	Yes.....				Yes.
Yes.....	No.....	No.....	No.....	Yes (t)...				Yes.

m Clerks only.

n Operators one week, clerks two weeks.

o With 9-hour operators; not optional with 4½-hour operators.

p For two weeks only.

q Every fourth Saturday.

r With half pay.

s One week's vacation given. Not reported as to whether or not pay is allowed.

t Not reported.

u Operators allowed two weeks' vacation, one with pay and one without pay; chief operators two weeks with pay.

v Operators' wishes granted as far as possible.

w Ten days granted. Not reported as to whether or not pay is allowed.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECI
OF THE COMPAC.—SHIFTS REQUIRED, COMPANIES PROVIDING NIGHT ALARMS AND IN WHICH
OVERTIME WORK IS OPTIONAL, AND HOLIDAYS AND VACATIONS GRANTED—
Concluded.

INDEPENDENT TELEPHONE COMPANIES.

Company.	City.	Does company require—		
		Split- trick work?	Even- ing work?	Night work?
Kansas City Home Telephone Co.....	Kansas City, Mo.....	Yes.	Yes.	Yes.
Keystone Telephone Co. of Philadelphia.....	Philadelphia, Pa.....	Yes.	Yes.	Yes.
Louisville Home Telephone Co.....	Louisville, Ky.....	Yes.	Yes.	No..
Maryland Telephone Co.....	Baltimore, Md.....	Yes.	Yes.	No..

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

American Telephone and Telegraph Co.....	Boston, Mass.....	Yes.	Yes.	Yes.
Do.....	Chicago, Ill.....	Yes.	Yes.	Yes.
Do.....	Cincinnati, Ohio.....	Yes.	Yes.	Yes.
Do.....	Kansas City, Mo.....	Yes.	Yes.	Yes.
Do.....	Minneapolis, Minn.....	Yes.	Yes.	No..
Do.....	New York, N. Y.....	Yes.	Yes.	Yes.
Do.....	Philadelphia, Pa.....	Yes.	Yes.	Yes.
Do.....	Pittsburg, Pa.....	Yes.	Yes.	Yes.
Do.....	St. Louis, Mo.....	Yes.	Yes.	Yes.

a On desk only.

b Chief operator only.

c One-half day for each month of service—minimum, 1 day; maximum, 2 weeks.

FIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS NIES—Continued.

C.—SHIFTS REQUIRED, COMPANIES PROVIDED NIGHT ALARMS AND IN WHICH
OVERTIME WORK IS OPTIONAL, AND HOLIDAYS AND VACATIONS GRANTED—
Concluded.

INDEPENDENT TELEPHONE COMPANIES.

Does company provide night alarm?	Is over-time work optional?	Are Saturday half holidays granted?		Are vacations allowed—				Are applicants paid while in training?
		All year?	Summer months only?	With pay—		Without pay—		
				One week?	Two weeks?	One week?	Two weeks?	
Yes.....	Yes.....	No.....	No.....	Yes.....				Yes.
Yes.....	No.....	Yes.....		Yes.....				No.
Yes (a).....	No.....	No.....	No.....			Yes.....		Yes.
Yes.....	No.....	No.....	No.....	No.....	(b)	Yes.....		Yes.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

Yes.....	Yes.....	Yes.....	.....	(c).....	(c).....	.....	.....	Yes.
Yes.....	Yes.....	No.....	No.....	(c).....	(c).....	.....	.....	Yes.
Yes.....	Yes.....	No.....	No.....	(c).....	(c).....	.....	.....	Yes.
No.....	Yes.....	No.....	No.....	(c).....	(c).....	.....	.....	Yes.
(d).....	Yes.....	No.....	No.....	(c).....	(c).....	.....	.....	Yes.
Yes.....	Yes.....	Yes (e).....	.....	(c).....	(c).....	.....	.....	Yes.
Yes.....	Yes.....	Yes (f).....	.....	(c).....	(c).....	.....	.....	Yes.
Yes.....	Yes.....	Yes.....	.....	(c).....	(c).....	.....	.....	Yes.
Yes.....	Yes.....	No.....	No.....	(c).....	(c).....	.....	.....	Yes.

^d Not reported.

^e Each employee is allowed every third Saturday afternoon.

^f Each employee is allowed every other Saturday afternoon.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

D.—RATES CHARGED FOR TELEPHONE SERVICE.

BELL TELEPHONE SYSTEM.

Company and kind of service.	Rates charged.	Length of conversation allowed.
Bell Telephone Co. of Missouri:		
St. Louis, Mo.:		
Flat rate, special line.	Business, \$10.40 per month; residence, \$4.50 per month....	5 minutes.
Flat rate, 2-party line.	Residence, \$3.50 per month.....	5 minutes.
Measured, special line.	Business, \$72 for 1,800 messages per year; residence, \$42 for 1,100 messages per year. All messages in excess of the number contracted for (both business and residence) cost 2 cents each.	5 minutes.
Measured, special line.	Business, \$80 for 800 messages per year, and 3 cents each for additional messages.	5 minutes.
Measured, 2-party line.	Business, \$48 for 800 messages per year, and 3 cents each for additional messages; residence, \$33 for 1,000 messages per year, and 3 cents each for additional messages.	5 minutes.
Automatic slot machines, special line.	Business, 15 cents per day; residence, 10 cents per day, guaranteed. Excess messages, 3 cents each.	5 minutes.
Automatic slot machines, 2-party line.	Business, 10 cents per day; residence, 7½ cents per day, guaranteed. Excess messages, 4 cents each.	5 minutes.
Toll lines.....	Not reported.	
Bell Telephone Co. of Pennsylvania:		
Philadelphia, Pa.:		
Flat rate, special line.	Residence, \$6 per month for Philadelphia service.....	Not reported.
Flat rate, 2-party line.	Residence, \$5 per month for Philadelphia service.....	Not reported.
Flat rate, 3-party line.	Business, \$90 per year; residence, \$36 per year (a).....	Not reported.
Flat rate, 4-party or more line.	Business, \$75 per year; residence, \$30 per year (a).....	Not reported.
Measured, special line.	Residence, \$24 per year (a).....	Not reported.
Measured, 2-party line.	Business and residence, \$48 for 600 calls per year; \$9 for each additional 200 calls up to 1,200; \$12 for each additional 300 calls up to 2,100; \$9 for each additional 300 calls from 2,100 to 5,400. Calls in excess of the number contracted for are 5 cents each on all contracts up to 2,100, and 4 cents each on all contracts of 2,400 or more.	5 minutes.
Automatic slot machines.	Residence, \$36 for 600 calls per year, and \$6 for each additional 200 calls contracted for up to 1,200. All messages in excess of the number contracted for are 5 cents each.	5 minutes.
Central District and Printing Telegraph Co.:	5 cents for each call.....	5 minutes.
Pittsburg, Pa.:		
Flat rate, special line.	Business, \$125 per year; residence, \$100 per year (b).....	No limit.
Flat rate, 2-party line.	Business, \$100 per year; residence, \$80 per year (b).....	No limit.
Flat rate, 3-party line.	Business, \$80 per year; residence, \$60 per year (b).....	No limit.
Measured, special line.	Business and residence, \$55 to \$100 for 600 to 2,000 calls per year. (b)	5 minutes.
Measured, 2-party line.	Business and residence, \$44 to \$71 for 600 to 1,400 calls per year. (b)	5 minutes.
Measured, 3-party line.	Business and residence, \$36 to \$63 for 600 to 1,400 calls per year. (b)	5 minutes.
Measured, 4-party line.	Business and residence, \$32 to \$59 for 600 to 1,400 calls per year. (b)	5 minutes.
Measured, 4-party line.	Residence, \$27 for 500 calls per year (b).....	5 minutes.
Automatic slot machines.	5 cents per message.....	5 minutes.
Toll lines.....	Vary according to locality.....	3 minutes.
Central Union Telephone Co.:		
Indianapolis, Ind.:		
Flat rate, special line.	Business, \$54 per year; residence, \$24 per year.....	No limit.
Flat rate, 2-party line.	Business, \$42 per year; residence, \$18 per year.....	No limit.
Flat rate, 12-party lines (farmers).	Residence, \$24 per year.....	No limit.
Automatic slot machines.	Not reported.....	5 minutes.
Toll lines.....	Not reported.....	3 minutes.

^a These rates apply only to subscribers for unlimited service to stations connected with an exchange in the same telephone zone. Five cents extra is charged for each message sent to some other zone in the city.

^b These rates include wall-set equipment. Desk-set equipment costs \$6 in addition to the rates shown.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

D.—RATES CHARGED FOR TELEPHONE SERVICE—Continued.

BELL TELEPHONE SYSTEM—Continued.

Company and kind of service.	Rates charged.	Length of conversation allowed.
Chesapeake and Potomac Telephone Co.: Baltimore, Md.:		
Flat rate, special line.	Residence, \$48 per year.	Not reported.
Measured, special line.	Business and residence, \$48 for 600 calls per year; \$9 for each additional 200 calls up to 1,400, and \$6 for each additional 200 calls above 1,400. Calls in excess of the number contracted for are 5 cents each on all contracts up to 1,800 calls, and 4 cents each on all contracts of 2,000 and over.	Not reported.
Measured, 2-party line.	Business and residence, \$30 per year for 30 calls per month; 5 cents for each additional call.	Not reported.
Measured, 4-party line.	Residence, \$36 for 600 calls per year; 5 cents for each additional call.	Not reported.
Washington, D. C.:		
Flat rate, special line.	Residence, \$48 per year.	No limit.
Measured, special line.	Residence, \$39 for 600 calls per year, and 5 cents for each additional message.	5 minutes.
Measured, special line.	Business, \$39 for 600 calls per year; \$9 for each additional 200 calls up to 1,200; \$6 for each additional 200 calls up to 2,400, and \$6 for each additional 300 calls above 2,400. Calls in excess of the number contracted for are 5 cents each on all contracts up to 1,200, 4 cents each on all contracts from 1,200 to 2,700, and 3 cents each on all contracts of 2,700 or more.	5 minutes.
Measured, 2-party line.	Business and residence, \$2.50 per month for 30 calls per month; 5 cents for each additional message.	5 minutes.
Measured, 4-party line.	Residence, \$36 for 600 calls per year; 5 cents for each additional message.	5 minutes.
Automatic slot machines.	5 cents per message.	5 minutes.
Pay stations.	5 cents per message, agent allowed 20 per cent of receipts.	5 minutes.
Toll lines.	Rates vary according to distance and connections.	3 minutes.
Long distance.	Rates vary according to distance and connections.	3 minutes.
"P. B. X."	Switchboard, \$24 per year; 2 "trunk" lines, \$48 per year; 2 stations, \$12 per year, and \$6 per year for each additional station; all messages, 2½ cents each.	Not reported.
Chicago Telephone Co.:		
Chicago, Ill.: (a)		
Flat rate, special line.	Business, \$125 per year.	No limit.
Flat rate, special line.	Residence, \$72 per year, payable in quarterly installments of \$18 each.	No limit.
Flat rate, 2-party line.	Residence, \$56 per year, payable in quarterly installments of \$14 each.	No limit.
Measured, special line.	Business, \$60 for 1,200 calls per year; for the next 2,400 calls, 3 cents each; for all calls in excess of 3,600, 2 cents each.	5 minutes.
Nickel prepayment, special line.	Business and residence, 20 cents per day guaranteed, including 4 messages.	5 minutes.
Nickel prepayment, 2-party line.	Business and residence, 12½ cents per day guaranteed, including 2½ messages.	5 minutes.
Nickel prepayment, 2-party line.	Residence, 10 cents per day guaranteed, including 2 messages.	5 minutes.
Nickel prepayment, 4-party line.	Residence, 5 cents per day guaranteed, including 1 message.	5 minutes.
Neighborhood exchange, special line.	Business, \$4 per month; residence, \$3 per month.	5 minutes.
Neighborhood exchange, 2-party line.	Business, \$3 per month; residence, \$2 per month.	5 minutes.
Neighborhood exchange, 4-party line.	Business, \$2 per month; residence, \$1.50 per month.	5 minutes.
Toll line.	10 cents per message of 3 minutes, 5 cents for each additional minute, to telephones within 15 miles of city hall, or within 1 mile of city limits and within the State of Illinois.	3 minutes.

* The rates shown apply to the city. In out-of-town exchanges different rates prevail.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

D.—RATES CHARGED FOR TELEPHONE SERVICE—Continued.

BELL TELEPHONE SYSTEM—Continued.

Company and kind of service.	Rates charged.	Length of conversation allowed.
Cincinnati and Suburban Bell Telephone Co.: Cincinnati, Ohio: (a)		
Flat rate, special line.	Business, within 4 miles, \$100 per year; residence, within 2 miles, \$48 per year; beyond 2 miles and within 4 miles, \$60 per year.	No limit.
Flat rate, 2-party line.	Residence, within 2 miles, \$30 per year; beyond 2 miles and within 4 miles, \$42 per year.	No limit.
Flat rate, 4-party line.	Residence, beyond 2 miles, and within 4 miles, \$30 per year.	No limit.
Measured, special line.	Business and residence, \$48 for 600 calls per year; 3 cents for each additional call.	5 minutes.
Guaranteed service, special line.	Business, \$5 per month.....	5 minutes.
Guaranteed service, 4-party line.	Business, \$3 per month; residence, \$1.50 per month.....	5 minutes.
Flat rate, joint use...	Business, \$25 per year.....	No limit.
Measured, joint use...	Business, \$12 per year; residence, \$3 per year.....	5 minutes.
Guaranteed, joint use.	Business, \$10 per year; residence, \$3 per year.....	5 minutes.
"P. B. X.," flat rate...	Switchboard, including operator's set, \$20 per year; each station, \$20 per year; mileage, per mile, \$24 per year; each trunk line, \$100 per year.	
"P. B. X.," message rate.	Switchboard, including operator's set, \$24 per year; each station \$9 per year; commuted rate trunks, unlimited outward calls, \$240 per year; message rate trunks, \$30 per year; mileage, per mile, \$24 per year; additional messages, 3 cents each.	
Toll lines.....	Not reported.....	3 minutes.
Citizens Telephone Co.: Covington, Ky.: (a)		
Flat rate, special line.	Business, within 4 miles, \$100 per year; residence, within 2 miles, \$48 per year; beyond 2 miles and within 4 miles, \$60 per year.	No limit.
Flat rate, 2-party line.	Residence, within 2 miles, \$30 per year; beyond 2 miles and within 4 miles, \$42 per year.	No limit.
Flat rate, 4-party line.	Residence, beyond 2 miles and within 4 miles, \$30 per year.	No limit.
Measured, special line.	Business and residence, \$48 for 600 calls per year; 3 cents for each additional call.	5 minutes.
Guaranteed service, special line.	Business, \$5 per month.....	5 minutes.
Guaranteed service, 4-party line.	Business, \$3 per month; residence, \$1.50 per month.....	5 minutes.
Flat rate, joint use...	Business, \$25 per year.....	No limit.
Measured, joint use...	Business, \$12 per year; residence, \$3 per year.....	5 minutes.
Guaranteed, joint use	Business, \$10 per year; residence, \$3 per year.....	5 minutes.
"P. B. X.," flat rate...	Switchboard, including operator's set, \$20 per year; each station, \$20 per year; mileage, per mile, \$24 per year; each trunk line, \$100 per year.	
"P. B. X.," message rate.	Switchboard, including operator's set, \$24 per year; each station, \$9 per year; commuted rate trunks, unlimited outward calls, \$240 per year; message rate trunks, \$30 per year; mileage, per mile, \$24 per year; additional messages, 3 cents each.	
Toll lines.....	Not reported.....	3 minutes.
Long distance.....	Not reported.....	3 minutes.
Cleveland Telephone Co.: Cleveland, Ohio:		
Flat rate, special line.	Business, \$84 per year; residence, \$54 per year.....	No limit.
Measured, special line.	Business, \$60 for 1,200 calls per year; 3 cents for each additional call.	No limit.
Automatic slot machines.	Business, 20 cents per day.....	5 minutes.
Flat rate, 2-party line.	Residence, \$42 per year.....	5 minutes.
Flat rate, 4-party line.	Residence, \$30 per year.....	5 minutes.
Measured, 2-party line.	Business, \$48 for 900 calls per year; 3 cents for each additional call.	5 minutes.
Automatic, 2-party line.	Business, 15 cents per day.....	5 minutes.
Automatic, 4-party line.	Residence, 5 cents per day.....	5 minutes.

a The rates shown apply to the city. In out-of-town exchanges different rates prevail.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

D.—RATES CHARGED FOR TELEPHONE SERVICE—Continued.

BELL TELEPHONE SYSTEM—Continued.

Company and kind of service.	Rates charged.	Length of conversation allowed.
Colorado Telephone Co.: Denver, Colo.:		
Flat rate, special line.	Residence, \$4 per month.	No limit.
Measured, special line.	Business, \$3.50 to \$4 per month; residence, \$2 to \$2.50 per month.	No limit.
Automatic slot machines.	Business, 15 cents per day guaranteed.	No limit.
Flat rate, 2-party line.	Business, 10 cents per day; residence, 7 cents per day.	Not reported.
Measured, 10-party line.	Residence, 5 cents to 7 cents per day guaranteed.	No limit.
Toll line.	Not reported.	3 minutes.
Long-distance line.	Not reported.	3 minutes.
Cumberland Telephone and Telegraph Co.: Louisville, Ky.:		
Flat rate, special line.	Business, \$90 per year; residence, \$42 per year (a).	No limit.
Flat rate, 2-party line.	Business, \$54 per year; residence, \$30 per year (a).	No limit.
Flat rate, 4-party line.	Business, \$42 per year; residence, \$24 per year (a).	No limit.
Automatic slot machines.	5 cents per message.	5 minutes.
Toll line.	Not reported.	3 minutes.
Nashville, Tenn.:		
Flat rate, special line.	Business, \$84 per year; residence, \$36 per year (a).	No limit.
Measured, special line.	Business, \$54 per year; residence, \$30 per year (a) For all calls in excess of 60 per month, 2 cents each.	Not reported.
Flat rate, 2-party line.	Business, \$48 per year; residence, \$30 per year (a).	No limit.
Flat rate, 4-party line.	Business, \$42 per year; residence, \$21 per year (a).	No limit.
Automatic slot machines.	5 cents per message.	5 minutes.
Toll lines.	Not reported.	3 minutes.
New Orleans, La.:		
Flat rate, special line.	Business, \$120 per year; residence, \$48 per year (a).	Not reported.
Flat rate, 2-party line.	Business, \$72 per year; residence, \$36 per year (a).	Not reported.
Flat rate, 4-party line.	Business, \$48 per year; residence, \$30 per year (a).	Not reported.
Flat rate, 6-party line.	Business, \$36 per year; residence, \$24 per year (a).	Not reported.
Measured, special line.	Business, \$60 per year; residence, \$42 per year (a) For all calls in excess of 250 per quarter, 2 cents each.	Not reported.
Measured, special line.	Business, \$36 per year; residence, \$24 per year, (a) and 2 cents each for messages sent.	Not reported.
Toll lines.	Not reported.	3 minutes.
Automatic slot machines.	5 cents per message.	5 minutes.
Missouri and Kansas Telephone Co.: Kansas City, Mo.:		
Subscribers.	Not reported.	
Joint users, unlimited service.	Business, \$1.25 per month; residence, 50 cents per month.	Not reported.
Joint users, measured service.	Business, \$1 per month; residence (hotel guest), 35 cents per month.	Not reported.
Joint users, prepayment service.	Business, \$1 per month.	Not reported.
Armstrong, Mo.:		
Flat rate, special line.	\$12 and \$24 per year.	Not reported.
Rural lines.	\$3 to \$12 per year.	Not reported.
Joint users, kind of service not reported.	Business, \$1 per month; residence, 50 cents per month; transposed listings, 15 cents per month.	Not reported.
Topeka, Kans.:		
Subscribers.	Not reported.	
Joint users, kind of service not reported.	Business, \$1 per month; residence, 50 cents per month; transposed listings, 15 cents per month.	Not reported.
Wellington, Kans.:		
Subscribers.	Not reported.	
Joint users, kind of service not reported.	Business, \$1 per month; residence, 50 cents per month; transposed listings, 15 cents per month.	Not reported.

a A discount of 50 cents per month allowed for payments quarterly in advance.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

D.—RATES CHARGED FOR TELEPHONE SERVICE—Continued.

BELL TELEPHONE SYSTEM—Continued.

Company and kind of service.	Rates charged.	Length of conversation allowed.
Nebraska Telephone Company: Omaha, Nebr.:		
Flat rate, special line.	Business, \$72 per year; residence, \$42 per year ^(a)	No limit.
Flat rate, 2-party line.	Business, \$54 per year; residence, \$36 per year ^(a)	No limit.
Flat rate, 4-party line.	Business, \$45 per year	No limit.
Measured, special line.	Not reported	No limit.
New England Telephone and Telegraph Co.:		
Boston, Mass. (Metropolitan district):		
Flat rate, special line.	Business, \$162 per year; residence, \$116 per year	No limit.
Flat rate, 2-party line.	Residence, \$90 per year	No limit.
Measured, special lines.	Business and residence, \$60 for 600 calls per year, and 5 cents for each additional call; or \$78 for 1,000 calls per year, and 3 cents for each additional call.	5 minutes.
Measured, 2-party line.	Business and residence, \$45 for 500 calls per year, and 5 cents for each additional call; or \$50 for 600 calls per year, and 5 cents for each additional call; or \$64 for 1,000 calls per year, and 3 cents for each additional call.	5 minutes.
Measured, 4-party line (coin-box service).	Business, \$3 per month; residence, \$2.50 per month	5 minutes.
Automatic slot machines.	To Metropolitan and certain suburban exchanges, 5 cents per call; to other suburban exchanges, 10 cents per call.	3 or 5 minutes
Toll lines	Not reported	3 minutes.
Boston, Mass. (suburban district):		
Flat rate, special lines.	Business, \$84 per year; residence, \$54 per year	No limit.
Flat rate, 2-party line.	Business, \$66 per year; residence, \$42 per year	No limit.
Flat rate, 4-party line.	Residence, \$30 per year	No limit.
Measured, special lines.	Business or residence, \$48 for 600 calls per year; 3 cents for each additional call.	5 minutes.
Measured, 2-party line.	Business or residence, \$36 for 600 calls per year; 3 cents for each additional call.	5 minutes.
Measured, 4-party line (coin-box service).	Business, \$2.50 per month; residence, \$2 per month	5 minutes.
Automatic slot machines.	Five or 10 cents per call, depending upon the exchange called.	3 or 5 minutes.
New York Telephone Co.:		
New York, N. Y.:		
Flat rate, special line.	Business, \$48 per year; residence, \$36 per year (in the Bronx district only).	
Flat rate, 2-party line.	Business, \$36 per year; residence, \$30 per year (in the Bronx district only). Five cents extra is charged for each message sent from one telephone district into another district, and 10 cents extra is charged for each message sent from one of these districts to an exchange in Manhattan south of 110th street.	
Measured, special line	Business and residence, \$48 for 600 calls per year; \$9 for each additional 200 calls up to 1,200; \$12 for each additional 300 calls up to 3,000; and \$9 for each additional 300 calls up to 5,700. Calls in excess of the number contracted for are 5 cents each on all contracts up to 2,700 calls, and 4 cents each on all contracts of 3,000 calls or more.	Not reported.
Measured, 2-party line.	Business and residence, \$42 for 600 calls per year; \$9 for each additional 200 calls up to 1,200; and \$9 for 300 additional calls above 1,200. All calls in excess of the number contracted for are 5 cents each. ^(b)	Not reported.
Automatic slot machines.	5 cents for local calls and 10 cents for long-distance calls....	Not reported

^a A discount of \$1 per month is allowed for payment of bill on or before the 10th of the month.

^b These rates apply to business only in certain districts.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

D.—RATES CHARGED FOR TELEPHONE SERVICE—Continued.

BELL TELEPHONE SYSTEM—Continued.

Company and kind of service.	Rates charged.	Length of conversation allowed.
New York Telephone Co.— Concluded. New York, N. Y.—Concluded. "P. B. X."	Switchboard with operating telephone, 2 lines to central office, 2 telephone stations, and right to send 3,600 local messages in 1 year for \$204 per year; additional lines, each \$24 per year; additional stations, each \$6 per year. Additional messages contracted for in advance in lots of 400 cost \$3 per hundred messages. Excess messages, 4 cents each.	
Northwestern Telephone Exchange Co.: Minneapolis, Minn.:		
Flat rate, special line.	Business, \$7.50 per month; residence, \$3.50 per month (a) .	Not reported.
Flat rate, 2-party line.	Business, \$4.50 per month; residence, \$3 per month (a)....	Not reported.
Flat rate, receiving line.	Business, \$2.50 per month (a)	Not reported.
Automatic slot, special line.	Business, \$7 per month guaranteed	Not reported.
Automatic slot, 2-party line.	Business, \$4 per month guaranteed	Not reported.
Private branch exchange trunks, 2-way.	Business, \$6 per month guaranteed	Not reported.
Pay stations.	Not reported	Not reported.
St. Paul, Minn.:		
Flat rate, special line.	Business, \$7.50 per month; residence, \$3.50 per month (a) .	Not reported.
Flat rate, 2-party line.	Business, \$4.50 per month; residence, \$3 per month (a)....	Not reported.
Receiving line.....	Business, \$2.50 per month (a)	Not reported.
Automatic slot, special line.	Business, \$7 per month guaranteed	Not reported.
Automatic slot, 2-party line.	Business, \$4 per month guaranteed	Not reported.
Private branch exchange trunks, 2-way.	Business, \$6 per month	Not reported.
Fargo, N. Dak.:		
Flat rate, special line.	Business, \$4 per month; residence, \$3 per month (a)	Not reported.
Flat rate, 2-party line.	Business, \$3.50 per month; residence, \$2.50 per month (a) .	Not reported.
Private branch exchange trunks, 2-way.	Business, \$3.50 per month	Not reported.
Rural lines.	Business, \$5 per year (b)	Not reported.
Pay stations.	Not reported	Not reported.
Sioux Falls, S. Dak.:		
Flat rate, special line.	Business, \$3 per month; residence, \$2.50 per month	Not reported.
Flat rate, 2-party line.	Business, \$2.50 per month; residence, \$2 per month	Not reported.
Flat rate, 3-party line.	Business, \$2 per month; residence, \$1.67 per month	Not reported.
Flat rate, 4-party line.	Business, \$1.50 per month; residence, \$1.25 per month	Not reported.
Rural lines.	Business, \$3 per year (b)	Not reported.
Pay stations.	Not reported	Not reported.
Red Wing, Minn.:		
Flat rate, special line.	Business, \$3 per month; residence, \$2.50 per month	Not reported.
Flat rate, 2-party line.	Business, \$2.50 per month; residence, \$2 per month	Not reported.
Flat rate, 3-party line.	Business, \$2 per month; residence, \$1.67 per month	Not reported.
Flat rate, 4-party line.	Business, \$1.50 per month; residence, 75 cents per month ..	Not reported.
Private branch exchange trunks, 2-way.	Business, \$3 per month	Not reported.
Rural lines.	Business, \$3 per year (b)	Not reported.
Northwestern Telephone Exchange Co.: Anoka, Minn.:		
Flat rate, special line.	Business, \$2.50 per month; residence, \$1.50 per month	Not reported.
Flat rate, 2-party line.	Business, \$2 per month; residence, \$1.25 per month	Not reported.
Flat rate, 4-party line.	Residence, \$1 per month	Not reported.
Rural lines.	\$3 per year (b)	Not reported.

a A discount of 50 cents per month allowed for payment of bill on or before the 15th of the month.

b Rural subscribers own and maintain line.

TABLE II.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

D.—RATES CHARGED FOR TELEPHONE SERVICE—Continued.

BELL TELEPHONE SYSTEM—Continued.

Company and kind of service.	Rates charged.	Length of conversation allowed.
Ozark Bell Telephone Co.: Springfield, Mo.: Subscribers.....	Not reported.	
Joint users.....	Business, \$1 per month; residence, 50 cents per month; transposed listings, 15 cents per month.	Not reported
Aurora, Mo.....	Not reported.	
Republic, Mo.: Subscribers.....	Not reported.	
Joint users.....	Business, \$1 per month; residence, 50 cents per month; transposed listings, 15 cents per month.	Not reported.
Pacific Telephone and Telegraph Co.: Los Angeles, Cal.: Flat rate, special line.	Business, \$5 per month; residence, \$3 per month.....	Not reported.
Flat rate, 2-party line.	Business, \$4 per month; residence, \$2.25 per month.....	Not reported.
Measured, special line.	Business, \$5 per month for 100 messages; residence, \$2 per month for 50 messages. All additional messages for business or residence are 2 cents each.	Not reported.
Measured, special line.	Business, \$4 per month for 60 messages, and 3 cents each for additional messages.	Not reported.
Nickel-in-the-slot, special line.	Business, 3 messages per day guaranteed. All additional messages, 3 cents each.	Not reported.
Nickel-in-the-slot, 2-party line.	Business, 2 messages per day guaranteed. All additional messages, 4 cents each.	Not reported.
Toll lines.....	Not reported.....	Not reported.
Portland, Oreg.: Flat rate, special line.	Business, \$8 per month; residence, \$3 per month.....	Not reported.
Flat rate, 2-party line.	Business, \$5 per month; residence, \$2.25 per month.....	Not reported.
Measured, special line.	Business, \$4 per month for 80 calls per month, and 2½ cents for each additional call; or \$5 per month for 125 calls per month, and 2 cents for each additional call.	Not reported.
Measured, 2-party line.	Business, \$3 per month for 60 calls per month, and 3 cents for each additional call; or \$4 per month for 100 calls per month, and 2½ cents for each additional call.	Not reported.
Nickel-in-the-slot, special line.	Business, 3 calls per day guaranteed, and 2½ cents each for additional calls.	Not reported.
Nickel-in-the-slot, 2-party line.	Business, 2 calls per day guaranteed, and 2½ cents each for additional calls.	Not reported.
Toll lines.....	Not reported.....	Not reported.
San Francisco, Cal.: Flat rate, special line.	Residence, \$4 per month.....	Not reported.
Flat rate, 2-party line.	Residence, \$3.50 per month.....	Not reported.
Flat rate, 4-party line.	Residence, \$2.50 per month.....	Not reported.
Measured, special line.	Business, \$5 per month for 42 calls per month, and 5 cents each for additional calls; \$9.15 per month for 125 calls per month, and 4 cents each for additional calls; \$12.47 per month for 209 calls per month, and 3 cents each for additional calls; \$15 per month for 292 calls per month, and 2½ cents each for additional calls; \$17.48 per month for 500 calls per month, and 2 cents each for additional calls; \$19.57 per month for 667 calls per month, and 1½ cents each for additional calls.	Not reported.
Measured, special line.	Residence, \$3 per month for 40 calls per month, and 3 cents each for additional calls.	Not reported.
Nickel-in-the-slot, special line.	Business, \$5.50 per month for 60 messages per month, and 5 cents each for additional messages.	Not reported.
Nickel-in-the-slot, 2-party line.	Business, \$4.50 per month for 60 messages per month, or 20 cents per day for 4 messages per day; residence, 10 cents per day for 2 messages. All additional messages are 5 cents each.	Not reported.
Nickel-in-the-slot, 4-party line.	Business, 10 cents per day for 2 messages per day, and 5 cents for each additional call; or \$1 per month and 5 cents for each message sent. Residence, 5 cents per day guaranteed, and 5 cents each for all messages in excess of 1 per day.	Not reported.
Toll lines.....	Not reported.....	Not reported.
Seattle, Wash.: Flat rate, special line.	Business, \$6.50 per month; residence, \$3 per month.....	Not reported.
Flat rate, 2-party line.	Business, \$4.50 per month; residence, \$2.50 per month.....	Not reported.
Measured, special line.	Business, \$4 per month for 100 calls per month, and 2 cents for each additional call; residence, \$2 per month for 50 calls per month, and 2 cents for each additional call.	Not reported.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

D.—RATES CHARGED FOR TELEPHONE SERVICE—Continued.

BELL TELEPHONE SYSTEM—Concluded.

Company and kind of service.	Rates charged.	Length of conversation allowed.
Pacific Telephone and Telegraph Co.—Concluded. Seattle, Wash.—Concl'd.		
Measured, 2-party line.	Business, \$3 per month for 60 calls per month, and 3 cents for each additional call.	Not reported.
Nickel-in-the-slot, special line.	Business, 3 calls per day guaranteed, and 2½ cents for each additional call; residence, 1½ calls per day guaranteed, and 2½ cents for each additional call.	Not reported.
Nickel-in-the-slot, 2-party line.	Business, 2 calls per day guaranteed, and 3 cents for each additional call; residence, 1½ calls per day guaranteed, and 3 cents for each additional call.	Not reported.
Toll lines.	Not reported.	Not reported.
Rocky Mountain Bell Telephone Co.:		
Salt Lake City, Utah:		
Flat rate, special line.	Business, \$78 per year; residence, \$36 per year.	Not reported.
Flat rate, 2-party line.	Business, \$72 per year; residence, \$30 per year.	Not reported.
Flat rate, 4-party line.	Residence, \$24 per year.	Not reported.
Measured, special line.	Business, \$48 for 1,200 calls per year.	Not reported.
Measured, "P. B. X."	Five stations and 3,000 messages, \$135 per year. Each additional station, \$6 per year. Messages in excess of 3,000 per year, 2 cents each.	Not reported.
Flat rate, "P. B. X."	Trunk lines sold only in pairs at \$144 per pair per year; \$12 per station per year; minimum number of stations, 3.	Not reported.
Toll lines.	5 cents to 25 cents, according to distance.	3 minutes.
Long distance.	Vary according to distance.	1 minute.
Southern Bell Telephone and Telegraph Co.:		
Atlanta, Ga.:		
Flat rate, special line.	Business, \$66 per year; residence, \$48 per year.	5 minutes.
Measured, special line.	\$36 per year, covering 100 calls per month, 3 cents for each additional call.	5 minutes.
Automatic slot machines.	5 cents per message.	5 minutes.
Flat rate, 2-party machines.	Business, \$48 per year; residence, \$36 per year.	5 minutes.
Measured, 2-party machines.	Residence, \$24 per year for 67 calls per month, 3 cents for each additional call.	5 minutes.
Long distance.	Published tariffs.	3 minutes.
Birmingham, Ala.:		
Flat rate, special line.	Not reported.	No limit.
Measured, special line.	Not reported.	5 minutes.
Automatic slot machines.	Not reported.	5 minutes.
Toll lines.	Not reported (various).	No limit.
Richmond, Va.:		
Flat rate, special line.	Business, \$72 per year; residence, \$36 per year (a).	No limit.
Flat rate, special line, joint user.	Business, \$24 per year; residence, \$12 per year (a).	No limit.
Flat rate, 2-party line.	Business, \$48 per year; residence, \$24 per year (a).	No limit.
Flat rate, unlimited, 2-party line.	Business, \$48 per year (a).	No limit.
Measured.	Business, \$36 per year for 100 messages per month. For each additional message, 3 cents. (a)	No limit.
Measured.	Residence, \$24 per year for 67 messages per month. For each additional message, 3 cents. (a)	No limit.
"P. B. X."	Trunks, \$108 per year; one way trunk, \$54 per year; switchboard, \$24 per year; ringing current, \$6 per year; instruments, \$12 per year.	
Southwestern Telegraph and Telephone Co.:		
Dallas, Tex.:		
Flat rate, special line.	Business, \$5 per month; residence, \$2 per month.	No limit.
Measured, special line.	5 cents per call.	5 minutes.
Automatic slot machines.	5 cents per call.	5 minutes.
Flat rate, 2-party line.	Business, \$3.50 per month.	No limit.
Flat rate, 3-party line.	Business, \$3 per month.	No limit.
Flat rate, 4-party line.	Business, \$2 per month; residence, \$1.50 per month.	No limit.

^a Rates apply within 2-mile radius. Beyond 2-mile radius, an additional charge of \$30 per year per mile is made.

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

D.—RATES CHARGED FOR TELEPHONE SERVICE—Concluded.

INDEPENDENT TELEPHONE COMPANIES.

Company and kind of service.	Rates charged.	Length of conversation allowed.
Kansas City Home Telephone Co.:		
Kansas City, Mo.:		
Flat rate.....	Business, \$60 per year; residence, \$36 per year.....	No limit.
Keystone Telephone Co. of Philadelphia:		
Philadelphia, Pa.:	Not reported	Not reported.
Louisville Home Telephone Co.:		
Louisville, Ky.:		
Flat rate, special line.	Business, \$48 per year; residence, \$24 and \$30 per year.....	No limit.
Flat rate, 2-party line.	\$36 per year 1 mile beyond city limits	No limit.
Flat rate, 4-party line.	\$30 per year 1 mile beyond city limits.....	No limit.
Flat rate, 6-party line.	\$24 per year 1 mile beyond city limits.....	No limit.
Automatic slot machines.	5 cents per call	5 minutes.
Toll calls.....	5 cents and 15 cents per call	5 minutes.
Maryland Telephone Co.:		
Baltimore, Md.:		
Flat rate, special line.	Business, \$72 per year; residence, \$60 per year.....	No limit.
Flat rate, 2-party line.	Business, \$68 per year; residence, \$48 per year.....	Not reported.
Measured service, special line.	600 calls per year, \$44; 700 calls per year, \$48; 800 calls per year, \$52; 1,000 calls per year, \$58; 1,200 calls per year, \$62.	No limit.
Measured service, 2-party line.	600 calls per year, \$35; 700 calls per year, \$39; 800 calls per year, \$43; 1,000 calls per year, \$49; 1,200 calls per year, \$53.	Not reported.
Measured service, 4-party line.	600 calls per year, \$26; 700 calls per year, \$30; 800 calls per year, \$34; 1,000 calls per year, \$40; 1,200 calls per year, \$44.	Not reported.
Excess calls.....	On contracts of less than 1,000 calls, 4 cents per call.....	
Excess calls.....	On contracts of 1,000 calls, 3 cents per call.....	
Excess calls.....	On contracts of 1,200 calls, 2 cents per call.....	

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

E.—DISTRIBUTION OF OPERATORS, ORIGINAL CALLS, AND AVERAGE CALLS PER OPERATOR, DURING EACH HOUR OF THE DAY.

BELL TELEPHONE SYSTEM.

Hour ending—	Bell Telephone Co. of Missouri, St. Louis, Mo.			Bell Telephone Co. of Missouri, East St. Louis, Ill.			Bell Telephone Co. of Pennsylvania, Philadelphia, Pa.			Central District and Printing Telegraph Co., Pittsburg, Pa.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.	21	209	10.0	1	23	23.0	5½	70	12.7	18	224	12.4
2 a. m.	21	161	7.7	1	41	41.0	5	57	11.4	18	100	5.6
3 a. m.	21	97	4.6	1	34	34.0	5	23	4.6	18	123	6.8
4 a. m.	21	88	4.2	1	19	19.0	5½	36	6.5	18	106	5.9
5 a. m.	21	123	5.9	1	29	29.0	6	53	8.8	18	133	7.4
6 a. m.	21	350	16.7	1	57	57.0	5½	62	11.3	18	155	8.6
7 a. m.	26	1,417	54.5	2	204	102.0	8	269	33.6	18	331	18.4
8 a. m.	65	5,824	89.6	4	994	248.5	16	1,157	72.3	51	2,314	45.4
9 a. m.	142	18,816	132.5	9	2,077	230.8	41½	4,060	97.8	118	11,948	101.3
10 a. m.	172	26,265	152.7	11	2,289	208.1	59½	6,668	112.1	161	21,329	132.5
11 a. m.	165	24,545	148.8	11	2,112	192.0	57½	6,973	121.3	158	19,166	121.3
12 m.	148	22,133	149.5	10	1,974	197.4	50	6,071	121.4	147	16,764	114.0
1 p. m.	127	16,826	132.5	11	1,502	136.5	43½	4,477	102.9	117	12,773	109.2
2 p. m.	148	19,106	129.1	12	1,646	137.2	49	5,045	103.0	147	15,824	107.6
3 p. m.	154	18,021	117.0	11	1,744	158.5	58½	5,768	98.6	143	14,982	104.8
4 p. m.	150	17,812	118.7	11	1,622	147.5	50½	4,776	96.6	142	15,092	106.3
5 p. m.	149	19,767	132.7	10	1,778	177.8	49½	4,659	94.1	136	15,598	114.7
6 p. m.	136	16,955	124.7	8	1,562	195.3	44	3,262	74.1	108	9,622	89.1
7 p. m.	106	10,453	98.6	7	1,134	162.0	35	2,172	62.1	87	5,693	65.4
8 p. m.	112	12,411	110.8	7	923	131.9	40½	2,754	68.0	83	6,505	78.4
9 p. m.	101	8,111	80.3	5½	661	120.2	36½	1,920	52.6	75	4,037	53.8
10 p. m.	51½	2,261	43.9	4	193	48.3	23½	812	34.6	53	1,732	32.7
11 p. m.	23	976	42.4	1	105	105.0	12	365	30.4	20	1,017	50.9
12 p. m.	22	459	20.9	1	57	57.0	8	182	22.8	18	481	26.7
Total.	.....	243,186	114.5	.....	22,780	161.0	.....	61,791	86.4	.....	176,050	93.1

Hour ending—	Central District and Printing Telegraph Co., McKeesport, Pa.			Central Union Telephone Co., Indianapolis, Ind.			Chesapeake and Potomac Telephone Co., Baltimore, Md.			Chesapeake and Potomac Telephone Co., D. C.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.	2	73	36.5	.....	.....	.....	9	212	23.6	6	241	40.2
2 a. m.	2	25	12.5	.....	.....	.....	7	137	19.6	5	148	29.6
3 a. m.	2	20	10.0	.....	.....	.....	6	92	15.3	4	82	20.5
4 a. m.	2	18	9.0	.....	.....	.....	6	85	14.2	4	50	12.5
5 a. m.	2	23	11.5	4	113	28.3	6	88	14.7	4	85	21.3
6 a. m.	2	34	17.0	6	220	36.7	6	149	24.8	9	182	20.2
7 a. m.	2	89	44.5	15	986	65.7	9	315	35.0	16	757	47.3
8 a. m.	3	532	177.3	24	2,862	119.3	19	1,058	55.7	26	3,359	129.2
9 a. m.	8	1,098	137.3	36	6,042	167.8	40	4,155	103.9	58	7,688	132.6
10 a. m.	8	1,206	150.8	36	6,097	169.4	53	8,884	167.6	88	14,300	162.5
11 a. m.	8	1,135	141.9	36	5,260	146.1	66	10,138	153.6	84	12,687	151.0
12 m.	7	1,005	143.6	35	5,511	157.5	61	9,362	153.5	79	10,136	128.3
1 p. m.	6	875	145.8	34	5,486	161.4	57	7,836	137.5	78	9,964	127.7
2 p. m.	6	994	165.7	31	5,710	184.2	63	9,015	143.1	78	10,112	129.6
3 p. m.	6	1,073	178.8	30	4,175	139.2	62	8,637	139.3	78	10,075	129.2
4 p. m.	6	1,114	185.7	31	4,749	153.2	56	7,849	140.2	73	9,548	130.8
5 p. m.	6	989	164.8	37	5,769	155.9	54	7,151	132.4	75	9,321	124.3
6 p. m.	6	1,042	173.7	40	4,915	122.9	49	6,145	125.4	71	7,617	107.3
7 p. m.	6	951	158.5	35	3,706	105.9	37	4,495	121.5	67	7,172	107.0
8 p. m.	6	977	162.8	34	3,222	94.8	32	3,656	114.2	68	7,569	111.3
9 p. m.	7	699	99.9	26	1,629	62.7	32	3,279	102.5	61	4,828	79.1
10 p. m.	4	309	77.3	16	622	38.9	16	1,509	94.3	24	2,295	95.6
11 p. m.	2	167	83.5	.....	.....	.....	10	716	71.6	13	1,027	79.0
12 p. m.	2	106	53.0	.....	.....	.....	9	354	39.3	9	585	65.0
Total.	.....	14,554	131.1	.....	67,074	132.6	.....	95,317	124.6	.....	129,828	120.4

TABLE 1.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

E.—DISTRIBUTION OF OPERATORS, ORIGINAL CALLS, AND AVERAGE CALLS PER OPERATOR, DURING EACH HOUR OF THE DAY—Continued.

BELL TELEPHONE SYSTEM—Continued.

Hour ending—	Chicago Telephone Co., Chicago, Ill.			Chicago Telephone Co., Evanston, Ill.			Chicago Telephone Co., Aurora, Ill.			Chicago Telephone Co., Waukegan, Ill.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.	26	905	34.8	2	31	15.5	2	20	10.0	2	50	25.0
2 a. m.	25	625	25.0	2	1	7.5	2	10	5.0	2	28	14.0
3 a. m.	24	460	19.2	2	2	1.0	2	7	3.5	2	23	11.5
4 a. m.	24	416	17.3	2	0	.....	2	15	7.5	2	23	11.5
5 a. m.	24	392	16.3	2	5	2.5	2	23	11.5	2	20	10.0
6 a. m.	27	620	23.0	2	8	4.0	2	43	21.5	2	43	21.5
7 a. m.	38	1,769	46.6	3	213	71.0	4	332	83.0	2	169	84.5
8 a. m.	110	6,248	56.8	9	1,057	117.4	9	947	105.2	5	527	105.4
9 a. m.	311	32,065	103.1	17	3,067	180.4	13	1,702	130.9	8	1,191	148.9
10 a. m.	360	59,728	165.9	18	3,049	169.4	13	2,138	164.5	9	1,287	143.0
11 a. m.	356	59,544	167.3	17	2,194	129.1	12	1,396	116.3	9	889	98.8
12 m.	348	56,305	161.8	15	1,569	104.6	12	1,128	94.0	8	898	112.3
1 p. m.	308	46,408	150.7	13	1,288	99.1	9	1,063	118.1	8	840	105.0
2 p. m.	328	50,571	154.2	12	1,595	132.9	10	1,250	125.0	8	987	123.4
3 p. m.	341	53,082	155.7	14	1,668	119.1	10	1,022	102.2	8	1,182	147.8
4 p. m.	340	52,543	154.5	13	1,642	126.3	9	1,197	133.8	8	591	73.9
5 p. m.	343	58,133	169.5	13	1,675	128.8	9	1,033	114.8	8	895	111.9
6 p. m.	330	40,983	124.2	14	1,738	124.1	10	1,370	137.0	9	1,073	119.2
7 p. m.	221	17,733	80.2	14	1,502	107.3	9	1,048	116.4	8	853	106.6
8 p. m.	172	13,844	80.5	14	1,959	139.9	11	1,212	110.2	8	1,217	152.1
9 p. m.	165	9,648	58.5	13	995	76.5	7	420	60.0	7	516	73.7
10 p. m.	138	4,394	31.8	9	250	27.8	4	272	68.0	3	205	68.3
11 p. m.	35	2,509	71.7	3	87	29.0	2	132	66.0	2	123	61.5
12 p. m.	31	1,442	46.5	2	33	16.5	2	68	34.0	2	113	56.5
Total	570,367	128.9	.....	25,628	113.9	.....	17,848	106.9	.....	13,743	104.1	.....

Hour ending—	Cincinnati and Suburban Bell Telephone Co., Cincinnati, Ohio.			Citizens' Telephone Co., Covington, Ky.			Cleveland Telephone Co., Cleveland, Ohio.			Cumberland Telephone and Telegraph Co., Louisville, Ky.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.	43	420	9.8	4	51	12.8	11	128	11.6	6	186	31.0
2 a. m.	43	327	7.6	4	58	14.5	11	152	13.8	6	136	22.7
3 a. m.	43	222	5.2	4	16	4.0	11	107	9.7	6	108	18.0
4 a. m.	43	231	5.4	4	49	12.3	11	84	7.6	6	83	13.8
5 a. m.	43	358	8.3	4	66	16.5	11	145	13.2	6	123	20.5
6 a. m.	43	653	15.2	4	114	28.5	11	257	23.4	6	188	31.3
7 a. m.	62	2,792	45.0	4	175	43.8	27	1,111	41.1	10	414	41.4
8 a. m.	166	10,746	64.7	19	1,430	75.3	71	5,062	71.3	21	1,264	60.2
9 a. m.	166	22,427	135.1	19	2,622	138.0	108	12,903	119.5	35	1,720	49.1
10 a. m.	166	27,180	163.7	19	3,006	158.2	108	16,408	151.9	35	7,119	203.4
11 a. m.	166	24,155	145.5	19	2,709	142.6	107	13,365	124.9	35	6,716	191.9
12 m.	166	19,083	115.0	19	2,795	147.1	96	11,958	124.6	30	5,646	188.2
1 p. m.	166	18,728	112.8	19	2,364	124.4	93	9,901	106.5	30	4,420	147.3
2 p. m.	166	19,903	119.9	19	2,231	117.4	94	11,069	117.8	30	4,715	157.2
3 p. m.	166	19,162	115.4	19	2,245	118.2	94	10,549	112.2	30	5,329	177.6
4 p. m.	166	18,810	113.3	19	1,911	100.6	93	10,847	116.6	30	5,603	186.8
5 p. m.	166	18,003	108.6	19	1,890	99.5	93	11,536	124.0	30	4,523	150.8
6 p. m.	153	17,006	111.2	19	2,025	106.6	84	8,068	96.0	30	4,423	147.4
7 p. m.	140	11,812	84.4	19	1,874	98.6	59	5,636	95.5	22	3,118	141.7
8 p. m.	140	12,379	88.4	19	2,783	146.5	66	5,988	90.7	22	2,735	124.3
9 p. m.	140	7,602	54.3	19	1,482	78.0	56	3,005	53.7	22	3,020	137.3
10 p. m.	43	3,284	76.4	4	496	124.0	34	1,056	31.1	16	1,364	85.3
11 p. m.	43	1,608	37.4	4	329	82.3	11	496	45.1	7	522	74.6
12 p. m.	43	1,043	24.3	4	94	23.5	11	249	22.6	6	214	35.7
Total	257,934	96.2	.....	32,815	107.2	.....	140,080	102.2	.....	63,689	133.5	.....

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

B.—DISTRIBUTION OF OPERATORS, ORIGINAL CALLS, AND AVERAGE CALLS PER OPERATOR, DURING EACH HOUR OF THE DAY—Continued.

BELL TELEPHONE SYSTEM—Continued.

Hour ending—	Cumberland phone and graph Co., ville, Tenn.			Cumberland phone and graph Co., Orleans, La.			Missouri and Kansas Telephone Co., Kansas City, Mo.			Missouri and Kansas Telephone Co., St. Joseph, Mo.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.....	8	205	25.6	11	505	45.9	15	433	28.9	3	89	29.7
2 a. m.....	8	183	22.9	11	327	29.7	14	307	21.9	3	68	22.7
3 a. m.....	8	41	5.1	11	253	23.0	13	257	19.8	3	42	14.0
4 a. m.....	8	97	12.1	11	255	23.2	13	270	20.8	3	33	11.0
5 a. m.....	8	84	10.5	11	246	22.4	13½	268	19.9	3	39	13.0
6 a. m.....	8	302	37.8	11	335	30.5	17	431	25.4	4	81	20.3
7 a. m.....	16	990	61.9	13	611	47.0	17	1,264	74.4	8	731	91.4
8 a. m.....	33	2,927	88.7	31	2,024	65.3	37½	4,301	114.7	14	2,677	191.2
9 a. m.....	41	6,910	168.5	63	7,573	120.2	56	10,114	180.6	24	3,274	136.4
10 a. m.....	51	10,813	212.0	63	12,101	192.1	70	12,376	176.8	25	5,420	216.8
11 a. m.....	51	8,966	175.8	63	11,394	180.9	70	11,354	162.2	25	5,146	205.8
12 m.....	49	8,684	177.2	63	9,396	149.1	68	10,372	152.5	25	4,637	185.5
1 p. m.....	46	8,305	180.5	62	7,004	113.0	60	9,348	155.8	24	4,076	169.8
2 p. m.....	43	7,358	171.1	62	6,516	105.1	61	9,609	158.5	24	4,334	180.6
3 p. m.....	43	8,558	199.0	61	10,239	167.9	61	8,450	138.5	23	4,471	194.4
4 p. m.....	43	7,645	177.8	61	9,627	157.8	62	8,770	141.5	22	3,759	170.9
5 p. m.....	42	8,643	205.8	61	8,577	140.6	62	9,725	156.9	24	4,228	176.2
6 p. m.....	38	7,403	194.8	53	6,937	130.9	67	11,132	166.1	22	3,802	172.8
7 p. m.....	38	5,239	137.8	53	4,675	88.2	61½	9,301	151.2	21	3,900	185.7
8 p. m.....	38	5,321	140.0	53	4,817	90.9	66	10,421	157.9	18	4,185	232.5
9 p. m.....	31	3,286	106.0	25	3,096	123.8	51	7,042	138.1	16	1,965	122.8
10 p. m.....	18	1,386	77.0	13	1,412	108.6	40	2,340	58.5	13	1,202	92.5
11 p. m.....	8	730	91.3	11	869	79.0	16½	1,139	69.0	5	278	55.6
12 p. m.....	8	366	45.8	11	600	54.5	16	653	40.8	5	76	15.2
Total.....	.....	104,442	152.5	.....	109,389	123.2	.....	139,737	135.9	.....	58,513	163.9

Hour ending—	Missouri and Kansas Telephone Co., Springfield, Mo.			Missouri and Kansas Telephone Co., Topeka, Kans.			Missouri and Kansas Telephone Co., Lawrence, Kans.			Missouri and Kansas Telephone Co., Leavenworth, Kans.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2 a. m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3 a. m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4 a. m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5 a. m.....	2	93	46.5	1	48	48.0	1	11	11.0	1	30	30.0
6 a. m.....	2	90	45.0	2	89	44.5	1	17	17.0	1	40	40.0
7 a. m.....	4	811	202.8	2	267	133.5	4	197	49.3	2	153	76.5
8 a. m.....	11	1,552	141.1	6	668	111.3	4	595	148.8	5	870	174.0
9 a. m.....	14	2,780	198.6	7	998	142.6	6	1,244	207.3	8	1,604	200.5
10 a. m.....	14	3,064	218.9	8	1,196	149.5	7	1,165	166.4	8	1,518	189.8
11 a. m.....	13	2,403	184.8	8	1,035	129.4	6	1,010	168.3	8	1,551	193.9
12 m.....	13	2,113	162.5	7	1,013	144.7	6	853	142.2	7	1,116	159.4
1 p. m.....	12	2,346	195.5	7	860	122.9	5	931	186.2	7	939	134.1
2 p. m.....	13	2,520	193.8	8	1,082	135.3	6	1,091	181.8	7	1,292	184.6
3 p. m.....	12	2,057	171.4	7	951	135.9	6	882	147.0	7	1,208	172.6
4 p. m.....	12	1,948	162.3	7	889	127.0	5	655	131.0	7	1,227	175.3
5 p. m.....	13	2,197	169.0	7	860	122.9	6	723	120.5	7	1,241	177.3
6 p. m.....	14	2,548	182.0	7	1,175	167.9	7	1,083	154.7	7	1,292	184.6
7 p. m.....	12	1,867	155.6	7	880	125.7	7	1,054	150.6	7	1,191	170.1
8 p. m.....	9	1,687	187.4	7	869	124.1	6	1,196	199.3	7	1,544	220.6
9 p. m.....	5	754	150.8	6	565	94.2	7	608	86.9	7	757	108.1
10 p. m.....	5	418	83.6	5	325	65.0	3	185	61.7	4	500	125.0
11 p. m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
12 p. m.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	31,248	173.6	.....	13,770	126.3	.....	13,500	145.2	.....	18,073	168.9

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

E.—DISTRIBUTION OF OPERATORS, ORIGINAL CALLS, AND AVERAGE CALLS PER OPERATOR, DURING EACH HOUR OF THE DAY—Continued.

BELL TELEPHONE SYSTEM—Continued.

Hour ending—	Missouri and Kansas Telephone Co., Chanute, Kans.			Missouri and Kansas Telephone Co., Sedalia, Mo.			Missouri and Kansas Telephone Co., Brookfield, Mo.			Nebraska Telephone Co., Omaha, Nebr.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.										8	311	38.9
2 a. m.										8	202	25.3
3 a. m.										8	78	9.8
4 a. m.										8	41	5.1
5 a. m.	1	15	15.0	2	47	23.5	2	12	6.0	8	82	10.3
6 a. m.	2	35	17.5	2	71	35.5	2	28	14.0	8	183	22.9
7 a. m.	2	111	55.5	3	296	98.7	2	90	45.0	8	700	87.5
8 a. m.	4	668	167.0	7	899	128.4	5	591	118.2	25	3,088	123.5
9 a. m.	6	1,059	176.5	8	1,693	211.6	6	1,008	168.0	46 $\frac{1}{2}$	8,195	176.2
10 a. m.	6	1,082	180.3	8	1,736	217.0	6	824	137.3	55	10,458	190.1
11 a. m.	6	899	149.8	8	1,565	195.6	6	794	132.3	52	9,330	179.4
12 m.	5	663	132.6	7	1,317	188.1	4	496	124.0	50 $\frac{1}{2}$	8,030	159.0
1 p. m.	4	838	209.5	6	1,018	169.7	4	495	123.8	46	7,733	168.1
2 p. m.	5	1,127	225.4	6	1,301	216.8	4	500	125.0	51 $\frac{1}{2}$	8,925	173.3
3 p. m.	5	636	127.2	6	1,179	196.5	4	425	106.3	48	7,956	165.8
4 p. m.	5	656	131.2	6	1,283	213.8	4	503	125.8	48	7,973	166.1
5 p. m.	6	878	146.3	8	1,470	183.8	6	622	103.7	49	8,445	172.3
6 p. m.	6	974	162.3	7	1,545	220.7	6	893	148.8	50 $\frac{1}{2}$	9,379	185.7
7 p. m.	5	1,010	202.0	6	1,351	230.2	6	1,065	177.5	42 $\frac{1}{2}$	7,062	166.2
8 p. m.	5	823	164.6	7	1,087	155.3	6	900	150.0	46	8,107	176.2
9 p. m.	4	539	134.8	6	551	91.8	4	570	142.5	36 $\frac{1}{2}$	4,868	133.4
10 p. m.	2	67	33.5	4	180	45.0	2	89	44.5	19 $\frac{1}{2}$	1,918	98.4
11 p. m.										5	1,073	134.1
12 p. m.										8	691	86.4
Total.		12,080	152.9		18,619	174.0		9,905	125.4		114,828	155.5

Hour ending--	New York Telephone Co., New York, N. Y.			New York Telephone Co., Yonkers, N. Y.			New York Telephone Co., Greenwich, Conn.			Northwestern Telephone Exchange Co., Minneapolis, Minn.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.	13	68	5.2	2	48	24.0	1	1	1.0	3 $\frac{1}{2}$	175	50.0
2 a. m.	13	56	4.3	2	27	13.5	1	1	1.0	3	126	42.0
3 a. m.	12	24	2.0	2	42	21.0	1	1	1.0	3	93	31.0
4 a. m.	10	9	.9	2	27	13.5	1	3	3.0	3	116	38.7
5 a. m.	12	18	1.5	2	31	15.5	1	1	1.0	3	100	33.3
6 a. m.	14	29	2.1	2	51	25.5	1	5	5.0	3 $\frac{1}{2}$	98	28.0
7 a. m.	23	180	7.8	3	125	41.7	1	23	23.0	5 $\frac{1}{2}$	440	80.0
8 a. m.	30	1,095	36.5	6	521	86.8	3	245	81.7	20	1,981	99.1
9 a. m.	49	3,738	76.3	12	1,568	130.7	7	507	72.4	53 $\frac{1}{2}$	8,552	159.9
10 a. m.	95	12,472	131.3	12	1,881	156.8	7	591	84.4	59 $\frac{1}{2}$	11,631	195.5
11 a. m.	121	15,178	125.4	12	1,401	116.8	7	521	74.4	59 $\frac{1}{2}$	10,343	173.8
12 m.	116	14,046	121.1	10	1,204	120.4	5	375	75.0	55 $\frac{1}{2}$	9,548	172.0
1 p. m.	118	10,928	92.6	9	854	94.9	4	293	73.3	48	8,415	175.3
2 p. m.	114	10,729	94.0	10	1,027	102.7	5	324	64.8	49	8,322	169.8
3 p. m.	114	11,712	102.7	10	947	94.7	5	318	63.6	53	7,528	142.0
4 p. m.	109	11,241	103.1	10	896	89.6	5	335	67.0	51 $\frac{1}{2}$	6,557	127.3
5 p. m.	109	9,680	88.8	9	791	87.9	5	351	70.2	48	7,255	151.1
6 p. m.	87	6,777	77.9	9	781	86.8	4	268	67.0	51 $\frac{1}{2}$	7,275	141.3
7 p. m.	60	4,693	78.2	10	859	85.9	5	284	56.8	37 $\frac{1}{2}$	4,608	122.9
8 p. m.	42	3,594	85.6	10	1,107	110.7	5	235	47.0	37	5,005	135.3
9 p. m.	41	2,427	59.2	10	709	70.9	5	153	30.6	35	3,145	89.9
10 p. m.	30	1,076	35.9	3	359	119.7	3	57	19.0	28 $\frac{1}{2}$	2,243	78.7
11 p. m.	22	452	20.5	3	177	59.0	1	19	19.0	15	917	61.1
12 p. m.	17	181	10.6	2	79	39.5	1	9	9.0	6	492	82.0
Total.		120,403	87.8		15,512	95.8		4,920	58.6		104,965	143.3

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

E.—DISTRIBUTION OF OPERATORS, ORIGINAL CALLS, AND AVERAGE CALLS PER OPERATOR, DURING EACH HOUR OF THE DAY—Continued.

BELL TELEPHONE SYSTEM—Continued.

Hour ending—	Northwestern Telephone Exchange Co., St. Paul, Minn.			Northwestern Telephone Exchange Co., Fargo, N. Dak.			Northwestern Telephone Exchange Co., Grand Forks, N. Dak.			Pacific Telephone and Telegraph Co., Los Angeles, Cal.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.	2½	121	48.4	2	93	46.5	1	158	158.0	11	185	16.8
2 a. m.	1½	90	60.0	2	43	21.5	1	70	70.0	11	130	11.8
3 a. m.	1½	58	38.7	1½	33	22.0	1	60	60.0	11	101	9.2
4 a. m.	1½	65	43.3	1½	28	18.7	1	50	50.0	11	70	6.4
5 a. m.	1½	66	44.0	2	63	31.5	1	73	73.0	11	129	11.7
6 a. m.	1½	73	48.7	2	133	66.5	1	70	70.0	11	306	27.8
7 a. m.	3	235	78.3	2	140	70.0	1	87	87.0	15½	1,995	128.7
8 a. m.	16	1,942	121.4	3	544	181.3	4	375	93.8	41½	6,902	166.3
9 a. m.	39	6,776	173.7	6	1,244	207.3	6	973	162.2	85	15,439	181.6
10 a. m.	47	7,710	164.0	7	1,476	210.9	6	1,174	195.7	95	17,796	187.3
11 a. m.	47	7,373	156.9	7	1,537	219.6	6	929	154.8	96	15,809	164.7
12 m.	44½	7,320	164.5	7	1,338	191.1	6	801	133.5	83	15,582	187.7
1 p. m.	39	6,034	154.7	7	1,087	155.3	6	652	108.7	85	13,760	161.9
2 p. m.	43	5,875	136.6	7	1,546	220.9	6	981	163.5	85	13,693	161.1
3 p. m.	43	6,255	145.5	7	1,404	200.6	6	1,182	197.0	78	13,523	173.4
4 p. m.	42½	4,665	109.8	7	1,332	190.3	6	892	148.7	76	12,350	162.5
5 p. m.	43	5,663	131.7	7	1,447	206.7	5½	987	179.5	84½	15,068	178.3
6 p. m.	42	4,542	108.1	7	1,465	209.3	5½	1,094	198.9	93	15,199	163.4
7 p. m.	39	4,258	109.2	7	1,404	200.6	6	967	161.2	87	15,696	180.4
8 p. m.	38½	4,460	115.8	7	1,437	205.3	6	1,212	202.0	87	15,187	174.6
9 p. m.	34½	3,471	100.6	6	876	146.0	6	762	127.0	63	7,411	117.6
10 p. m.	22½	2,036	90.5	5	441	88.2	4	398	99.5	29½	2,324	78.8
11 p. m.	9½	864	90.9	2½	272	108.8	3	201	67.0	11	1,170	106.4
12 p. m.	4	365	91.3	2	107	53.5	1	125	125.0	11	501	45.5
Total.	80,317	132.3	.....	19,490	170.2	.....	14,273	148.7	.....	200,326	157.5	.....

Hour ending—	Pacific Telephone and Telegraph Co., Portland, Oreg.			Pacific Telephone and Telegraph Co., San Francisco, Cal.			Pacific Telephone and Telegraph Co., Seattle, Wash.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.	14	264	18.9	13	443	34.1	10	177	17.7
2 a. m.	14	125	8.9	13	276	21.2	10	109	10.9
3 a. m.	14	113	8.1	13	167	12.8	10	94	9.4
4 a. m.	14	68	4.9	13	119	9.2	10	43	4.3
5 a. m.	14	100	7.1	13	159	12.2	10	63	6.3
6 a. m.	14	240	17.1	13	222	17.1	10	187	18.7
7 a. m.	15½	1,100	71.0	13	730	56.2	12½	829	66.3
8 a. m.	50	4,431	88.6	29	3,342	115.2	35½	3,811	107.4
9 a. m.	75	11,693	155.9	82½	13,325	161.5	64½	11,209	173.8
10 a. m.	76	15,554	204.7	137	27,852	203.3	88½	15,293	172.8
11 a. m.	77½	14,974	193.2	138	26,344	190.9	87½	14,977	171.2
12 m.	80½	14,075	174.8	128½	23,453	182.5	82	15,035	183.4
1 p. m.	82	13,061	159.3	107½	18,078	168.2	77½	11,530	148.8
2 p. m.	74	13,182	178.1	122½	21,601	176.3	79½	13,288	167.1
3 p. m.	70½	11,535	163.6	114½	20,374	177.9	78½	12,107	154.2
4 p. m.	75	11,029	147.1	114½	18,792	164.1	78½	12,453	158.6
5 p. m.	77½	10,886	140.5	112	19,112	170.6	80	15,254	190.7
6 p. m.	79	12,643	160.0	90½	14,404	159.2	81	12,840	158.5
7 p. m.	73½	11,217	152.6	74	10,039	135.7	65½	10,046	153.4
8 p. m.	77	13,344	173.3	75½	14,414	190.9	61	9,502	155.8
9 p. m.	63½	6,266	98.7	61½	8,594	139.7	54½	5,875	107.8
10 p. m.	51	1,805	35.4	32	2,322	72.6	26½	2,070	78.1
11 p. m.	19½	875	44.9	15	1,206	80.4	13	905	69.6
12 p. m.	14	436	31.1	13	693	53.3	10	343	34.3
Total.	169,016	139.1	.....	246,061	159.9	.....	168,040	147.9	.....

TABLE I.—EMPLOYMENT AND WORKING CONDITIONS IN SPECIFIED TELEPHONE COMPANIES, AS REPORTED BY OFFICIALS OF THE COMPANIES—Concluded.

E.—DISTRIBUTION OF OPERATORS, ORIGINAL CALLS, AND AVERAGE CALLS PER OPERATOR, DURING EACH HOUR OF THE DAY—Concluded.

BELL TELEPHONE SYSTEM—Concluded.

Hour ending—	Southern Bell Telephone and Telegraph Co., Atlanta, Ga.			Southern Bell Telephone and Telegraph Co., Birmingham, Ala.			Southwestern Telegraph and Telephone Co., Dallas, Tex.		
	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.	Number of operators.	Original calls.	Average calls per operator.
1 a. m.	4	116	29.0	3	63	21.0	11	139	12.6
2 a. m.	4	89	22.3	3	23	7.7	10	130	13.0
3 a. m.	4	48	12.0	3	44	14.7	9	118	13.1
4 a. m.	4	47	11.8	3	43	14.3	8	145	18.1
5 a. m.	4	244	61.0	3	59	19.7	8	136	17.0
6 a. m.	6	604	100.7	4	227	56.8	20½	206	10.0
7 a. m.	15	1,020	68.0	6	371	61.8	78	957	12.3
8 a. m.	31	3,488	112.5	9	1,343	149.2	69½	4,697	67.6
9 a. m.	45	7,430	165.1	19	3,868	203.6	88	7,411	84.2
10 a. m.	53	11,549	217.9	22	5,109	232.2	94	10,655	113.4
11 a. m.	50	10,081	201.6	22	3,969	180.4	93½	9,249	98.9
12 m.	45	6,391	142.0	21	3,652	173.9	95	9,662	101.7
1 p. m.	44	7,340	166.8	22	3,616	164.4	92½	8,687	93.9
2 p. m.	43	7,790	181.2	23	3,455	150.2	93	8,415	90.5
3 p. m.	46	7,055	153.4	23	3,606	156.8	91½	8,231	90.0
4 p. m.	46	8,359	181.7	21	3,563	169.7	90	8,647	96.1
5 p. m.	44	8,260	187.7	21	3,509	167.1	91	9,739	107.0
6 p. m.	46	8,093	175.9	23	3,895	169.3	90	9,105	101.2
7 p. m.	38	8,364	220.1	21	3,219	153.3	93	7,507	80.7
8 p. m.	30	7,142	238.1	15	2,917	194.5	88	7,447	84.6
9 p. m.	24	3,210	133.8	14	2,314	165.3	79	4,503	57.0
10 p. m.	14	1,388	99.1	9	1,846	205.1	41½	1,821	43.9
11 p. m.	8	201	25.1	4	1,206	301.5	17	679	39.9
12 p. m.	4	194	48.5	3	372	124.0	14	451	32.2
Total		108,503	166.4		52,289	164.9		118,737	81.0

TABLE III.—WORKING CONDITIONS IN SPECIFIED TELEPHONE
BELL TELEPHONE SYSTEM.

Company and exchange.	Floor on which located.	Are elevators provided for use of employees?	Stairways.	Are fire escapes provided?
Bell Telephone Co. of Missouri:				
St. Louis, Mo.:				
Bomont.....	2d.....	No....	1	No..
Lindell.....	3d.....	No....	1	No..
Main.....	6th.....	Yes...	1	Yes.
Missouri.....	3d.....	No....	1	No..
Olive.....	3d and 5th.....	Yes...	1	Yes.
Bell Telephone Co. of Pennsylvania:				
Philadelphia, Pa.:				
Locust.....	6th, 7th, and 8th.....	Yes...	1	Yes.
Lombard.....	2d and 4th.....	No....	1	Yes.
Main.....	4th.....	Yes...	1	No..
Toll.....	6th, 7th, and 8th.....	Yes...	1	Yes.
Central District and Printing Telegraph Co.:				
Pittsburg, Pa.:				
Toll.....	7th.....	Yes...	1	Yes.
Chesapeake and Potomac Telephone Co.:				
Baltimore, Md.:				
St. Paul.....	9th.....	Yes...	1	(c)
Tuxedo.....	3d.....	No....	1	Yes.
Chesapeake and Potomac Telephone Co.:				
Washington, D. C.:				
Columbia.....	2d.....	No....	1	Yes.
Main.....	6th.....	Yes...	1	No..
North.....	4th.....	No....	1	No..
Chicago Telephone Co.:				
Chicago, Ill.:				
Calumet.....	1st.....			
Central.....	2d and 3d.....	Yes...	1	Yes.
Harrison.....	7th.....	Yes...	1	Yes.
Main.....	8th.....	Yes...	2	Yes.
Toll.....	7th.....	Yes...	2	Yes.
Cincinnati and Suburban Bell Telephone Co.:				
Cincinnati, Ohio:				
Canal.....	3d.....	No....	1	Yes.
Main.....	7th.....	Yes...	1	Yes.
West.....	3d.....	No....	1	Yes.
Cumberland Telephone and Telegraph Co.:				
Louisville, Ky.:				
East.....	2d.....	No....	1	No..
Main.....	2d.....	No....	1	Yes.
South.....	1st.....			
Nashville, Tenn.:				
Hemlock.....	2d.....	No....	1	No..
Main.....	3d.....	No....	1	Yes.
Walnut.....	2d.....	No....	1	No..
New Orleans, La.:				
Hemlock.....	2d.....	No....	1	No..
Jackson.....	2d.....	No....	1	No..
Main.....	4th.....	No....	1	Yes.
Toll.....	3d.....	No....	1	Yes.
Missouri and Kansas Telephone Co.:				
Kansas City, Mo.:				
Argentine.....	2d.....	No....	1	No..
Grand.....	2d.....	No....	2	Yes.
Main and Toll.....	4th and 5th.....	Yes...	1	Yes.
New England Telephone and Telegraph Co.:				
Boston, Mass.:				
Arlington.....	1st.....			
Back Bay.....	3d and 4th.....	No....	2	Yes.
Brookline.....	2d.....	No....	2	Yes.
Cambridge.....	1st.....			
Main.....	9th.....	Yes...	4	Yes.
Oxford.....	3d.....	No....	1	Yes.
Toll.....	8th.....	Yes...	4	Yes.
Tremont.....	1st.....			

^a Used as rest room also.

^b Lunch room used as rest room.

^c Not reported.

^d Electric lights needed on board in parts of room.

^e If necessary may use toilet on floor below, which contains 12 seats.

^f When necessary toilet in other building may be used.

^g Rest room used as lunch room.

^h Used as lunch room also.

COMPANIES, AS REPORTED BY SPECIAL AGENTS.

BELL TELEPHONE SYSTEM.

Is light sufficient—		Is there sufficient ventilation?	Does company provide—			Toilet facilities for women.				Is air of work room affected by toilets?
By day?	By night?		Lunch room?	Rest room?	Wash room?	Number of women.	Is there reasonable privacy of approach?	Sanitary condition.	Number of seats.	
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	50	Yes....	Good....	3	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	30	Yes....	Good....	5	No.
No....	Yes...	Yes...	Yes....	Yes....	Yes....	150	Yes....	Good....	8	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	25	Yes....	Good....	4	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	150	Yes....	Good....	8	No.
No....	No....	Yes...	Yes....	Yes....	Yes....	50	Yes....	Good....	9	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	69	Yes....	Good....	14	No.
Yes....	Yes...	Yes...	Yes (a)...	(b)	Yes....	35	Yes....	Good....	9	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	50	Yes....	Good....	9	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	160	Yes....	Good....	17	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	100	Yes....	Good....	12	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	20	Yes....	Good....	3	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	16	Yes....	Good....	9	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	80	Yes....	Good....	8	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	75	Yes....	Good....	9	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	70	Yes....	Good....	5	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	225	Yes....	Good....	13	No.
No (d)....	Yes...	No....	Yes....	Yes....	Yes....	145	Yes....	Good....	6	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	200	Yes....	Good....	e 7	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	150	Yes....	Good....	f 12	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	50	Yes....	Good....	12	No.
Yes....	Yes...	No....	Yes....	Yes....	Yes....	58	Yes....	Fair....	7	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	40	Yes....	Good....	12	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	15	Yes....	Good....	3	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	60	Yes....	Fair....	6	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	28	Yes....	Fair....	1	No.
Yes....	Yes...	Yes...	(g)	Yes (h)....	Yes....	17	Yes....	Good....	2	No.
Yes....	Yes...	Yes...	Yes....	No....	Yes....	53	Yes....	Bad....	4	(c)
Yes....	Yes...	Yes...	(g)	Yes (h)....	Yes....	19	Yes....	Fair....	2	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	25	Yes....	Bad....	3	No.
Yes....	Yes...	Yes...	(g)	Yes (h)....	Yes....	12	Yes....	Good....	2	No.
Yes....	No....	Yes...	Yes....	Yes (j)....	(k)	70	Yes....	Fair....	4	No.
Yes....	Yes...	Yes...	Yes....	Yes (j)....	(k)	70	Yes....	Good....	4	No.
Yes....	Yes...	Yes...	No....	Yes....	Yes....	5	Yes....	Good....	1	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	22	Yes....	Good....	4	No.
Yes....	Yes...	No (m)....	Yes....	Yes....	Yes....	43	Yes....	Good....	8	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	8	Yes....	Good....	2	No.
Yes ^o	Yes...	Yes...	Yes....	Yes....	Yes....	80	Yes....	Good....	4	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	22	Yes....	Good....	3	No.
Yes....	Yes...	Yes...	Yes....	Yes....	No....	50	Yes....	Good....	2	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	120	Yes....	Good....	e 4	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	105	Yes....	Good....	6	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	250	Yes....	Good....	12	No.
Yes....	Yes...	Yes...	Yes....	Yes....	Yes....	55	Yes....	Good....	3	No.

ⁱ The stairway is on outside of building.

^j Used as wash room also.

^k Rest room used as wash room.

^l Only a ladder.

^m Good in room of "B"-board operators.

ⁿ Fireproof iron stairway inside rear of building.

^o Not sufficient in cloudy weather.

^p Two iron stairways within building and employees can escape from 6th floor to other buildings or from roof to other buildings.

TABLE II.—WORKING CONDITIONS IN SPECIFIED TELEPHONE
BELL TELEPHONE SYSTEM—Concluded.

Company and exchange.	Floor on which located.	Are elevators provided for use of employees?	Stairways.	Are fire escapes provided?
New York Telephone Co.:				
New York, N. Y.:				
Courtland.....	9th.....	Yes...	3	No..
Courtland Toll.....	8th.....	Yes...	3	No..
Greenwich.....	4th.....	No...	1	No..
Mount Vernon.....	4th.....	No...	1	Yes.
Riverside.....	3d.....	No...	2	No..
Spring.....	4th.....	Yes...	1	Yes.
Southern Bell Telephone and Telegraph Co.:				
Atlanta, Ga.:				
Decatur.....	21.....	No...	1	No..
Ivy.....	21.....	No...	1	No..
Main.....	3d.....	Yes...	1	Yes.
Toll.....	3d.....	Yes...	1	Yes.
Birmingham, Ala.:				
Main.....	2d.....	Yes...	1	Yes.
Richmond, Va.:				
E. Grace st.....	3d.....	Yes...	2	Yes.
Southwestern Telegraph and Telephone Co.:				
Dallas, Tex.:				
Cliff.....	1st.....			
Haskell.....	2d.....	No...	2	No..
Main.....	2d.....	Yes (j)	1	Yes.

INDEPENDENT TELEPHONE COMPANIES.

Kansas City Home Telephone Co.:				
Kansas City, Mo.:				
Main.....	3d.....	No....	2	No..
Toll.....	2d.....	No....	2	No..
Keystone Telephone Co.:				
Philadelphia, Pa.:				
Long distance.....	2d and 4th.....	Yes...	1	Yes.
Main.....	5th.....	Yes...	1	Yes.
West.....	2d.....	No...	1	No..
Louisville Home Telephone Co.:				
Louisville, Ky.:				
Main.....	3d.....	No...	1	Yes.
Maryland Telephone Co.:				
Baltimore, Md.:				
Courtland.....	7th.....	Yes...	1	Yes.
Druid Hill.....	1st.....			

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

American Telephone and Telegraph Co.:				
Chicago, Ill.....	1st.....		2	Yes.
Cincinnati, Ohio.....	4th.....	Yes...	1	Yes.
New York, N. Y.....	7th.....	Yes...	3	Yes.
Philadelphia, Pa.....	7th.....	Yes...	4	No..
Pittsburg, Pa.....	8th.....	Yes...	1	Yes.
St. Louis, Mo.....	1st.....	Yes...		

^a Except in one part of room.

^b If necessary toilet in floor below may be used.

^c Used as rest room also.

^d Lunch room used as rest room.

^e Operators go home to meals.

^f Small room used as cloak room and toilet room.

^g But no sewer in building.

COMPANIES, AS REPORTED BY SPECIAL AGENTS—Concluded.

BELL TELEPHONE SYSTEM—Concluded.

Is light sufficient—		Is there sufficient ventilation?	Does company provide—			Toilet facilities for women.				Is air of work room affected by toilets?
By day?	By night?		Lunch room?	Rest room?	Wash room?	Number of women.	Is there reasonable privacy of approach?	Sanitary condition.	Number of seats.	
Yes (a)	Yes...	Yes...	Yes.....	Yes.....	Yes.....	150	Yes.....	Good....	b 10	No.
No....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	80	Yes.....	Good....	b 10	No.
Yes....	Yes...	Yes...	Yes (e)	(d)	Yes.....	12	Yes.....	Good....	1	No.
Yes....	Yes...	Yes...	Yes (e)	(d)	Yes.....	35	Yes.....	Good....	2	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	98	Yes.....	Good....	7	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	100	Yes.....	Good....	14	No.
Yes....	Yes...	Yes...	No (e)...	No.....	Yes (f)...	3	Yes.....	Good (g)...	h 1	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	30	Yes.....	Good....	5	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	75	Yes.....	Good....	7	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	75	Yes.....	Good....	7	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	35	Yes.....	Good....	5	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	65	Yes.....	Good....	i 10	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	12	Yes.....	Good....	1	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	60	Yes.....	Good....	7	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	75	Yes.....	Good....	5	No.

INDEPENDENT TELEPHONE COMPANIES.

Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	108	Yes.....	Good....	5	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	20	Yes.....	Good....	3	No.
Yes....	Yes...	Yes...	Yes.....	No.....	Yes.....	18	Yes.....	Good....	3	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	60	Yes.....	Good....	8	No.
Yes....	Yes...	Yes...	Yes.....	No.....	Yes.....	17	Yes.....	Good....	4	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	65	Yes.....	Good....	5	No.
Yes....	Yes...	Yes...	Yes.....	Yes.....	Yes.....	60	Yes.....	Good....	3	No.
Yes....	Yes...	Yes...	Yes (e)...	(d)	No.....	9	Yes.....	Good....	1	No.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

Yes....	Yes...	No.....	Yes.....	Yes.....	Yes.....	75	Yes.....	Fair.....	4	No.
Yes....	Yes...	Yes.....	(k)	Yes (l)...	Yes.....	40	Yes.....	Fair.....	2	No.
Yes....	Yes...	Yes.....	Yes.....	Yes.....	Yes.....	100	Yes.....	Good....	m 10	No.
Yes....	Yes...	Yes.....	Yes.....	Yes.....	Yes.....	95	Yes.....	Good....	14	No.
Yes....	Yes...	Yes.....	Yes.....	Yes.....	Yes.....	160	Yes.....	Good....	17	No.
Yes....	Yes...	Yes.....	Yes.....	Yes.....	Yes.....	50	Yes.....	Good....	3	No.

^a Use commode in toilet room.

ⁱ If necessary may use toilet room provided for office force.

^j Are requested to walk when going downstairs.

^k Rest room used as lunch room.

^l Used as lunch room also.

^m If necessary may use toilets on other floors.

TABLE III.—SUMMARY OF EMPLOYMENT AND WORKING CONDITIONS

A.—OCCUPATION, SEX, LENGTH OF EMPLOYMENT IN TELEPHONE SERVICE, AND AGE OF EMPLOYEES AT ENTERING SERVICE.

BELL TELEPHONE SYSTEM.

Occupation (all cities).	Sex.	Total employees.	Number of employees whose years of employment in telephone service were—							
			Under 1.	1 and under 2.	2 and under 3.	3 and under 4.	4 and under 5.	5 and under 7.	7 and under 10.	10 and over.
Clerks, day.....	F.	9	.....	1	.....	5	1	1	.....	1
Clerks, evening.....	F.	2	.....	.....	1	.....	.....	.....	1	.....
Total clerks.....	F.	11	.....	1	1	5	1	1	1	1
Matrons, day.....	F.	1	.....	.....	.....	.....	.....	.....	.....	1
Messengers, day.....	M.	3	1	.....	1	.....	1	.....	.....	.....
Messengers, evening.....	F.	1	.....	1	.....	.....	.....	.....	.....	.....
Total messengers.....		4	1	1	1	.....	1	.....	.....	.....
Monitors, day.....	F.	2	.....	.....	.....	1	.....	1	.....	.....
Monitors, evening.....	F.	1	.....	.....	1	.....	.....	.....	.....	.....
Monitors, split trick.....	F.	1	.....	.....	1	.....	.....	.....	.....	.....
Total monitors.....	F.	4	.....	.....	2	1	.....	1	.....	.....
Operators, day.....	F.	a 97	10	26	20	15	8	13	4	1
Operators, evening.....	F.	b 81	38	16	12	5	3	3	4	.....
Operators, night.....	F.	c 27	7	7	6	2	3	2	.....	.....
Operators, split trick.....	F.	d 62	8	26	16	5	4	3	.....	.....
Total operators.....	F.	267	63	75	54	27	18	21	8	1
Operators, chief, day.....	F.	4	.....	.....	.....	.....	.....	.....	1	3
Operators, chief, evening.....	F.	1	.....	.....	.....	1	.....	.....	.....	.....
Operators, chief, night.....	F.	7	.....	.....	1	1	1	2	2	.....
Total operators, chief.....	F.	12	.....	.....	1	2	1	2	3	3
Operators, chief assistant, day.....	F.	3	.....	.....	.....	.....	.....	.....	2	1
Recorders, day.....	F.	4	.....	1	2	.....	.....	.....	.....	1
Recorders, night.....	F.	1	.....	.....	.....	.....	.....	.....	1	.....
Total recorders.....	F.	5	.....	1	2	.....	.....	.....	1	1
Service observers, day.....	F.	1	.....	.....	.....	.....	.....	1	.....	.....
Supervisors, day.....	F.	23	.....	1	2	.....	7	6	3	4
Supervisors, evening.....	F.	e 8	.....	.....	1	.....	3	1	2	1
Supervisors, night.....	F.	2	.....	.....	.....	1	.....	.....	1	.....
Supervisors, split-trick.....	F.	5	1	.....	.....	.....	.....	3	1	.....
Total supervisors.....	F.	e 38	1	1	3	1	10	10	7	5
Supervisors, chief, day.....	F.	1	.....	.....	.....	.....	.....	.....	.....	1
Ticket checkers, chief, day.....	F.	1	.....	.....	.....	.....	.....	.....	1	.....
Timekeepers, day.....	F.	1	.....	.....	.....	.....	.....	1	.....	.....
All occupations, males.....		3	1	.....	1	.....	1	.....	.....	.....
All occupations, females.....		f 346	64	79	63	36	30	37	23	14
Total, all employees.....		f 349	65	79	64	36	31	37	23	14

a Including 2 who work day and split trick alternate weeks; also 1 who works day or evening trick, as required, and 1 whose age at entering service not reported.

b Including 1 who works evening part of week and night part of week.

c Not including 1 who works night trick part of week and evening trick part of week.

IN TELEPHONE COMPANIES, AS REPORTED BY EMPLOYEES.

A.—OCCUPATION, SEX, LENGTH OF EMPLOYMENT IN TELEPHONE SERVICE, AND AGE OF EMPLOYEES AT ENTERING SERVICE.

BELL TELEPHONE SYSTEM.

Number of employees whose age at entering telephone service was—										
11 years and under.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years and over.
			1	1	2	1		1	1	2
							1			1
			1	1	2	1	1	1	1	3
										1
2	1									
	1									
2	2									
						1		1	1	
						1				
						2		1	1	
	1	4	8	16	19	19	16	4	3	6
			3	7	23	10	18	7	9	4
				1	6	8	3	5	2	2
1			3	7	16	18	5	3	3	6
1	1	4	14	31	64	55	42	19	17	18
				1	2		1			
						1	1			
						1	2	2		2
				1	2	1	4	2		2
							1	1		1
					2			1		2
					2			1		2
						1				
			2	3	5	3	4	2	3	1
					1	2	1	2		1
				1	1	1				
			1		1		3			
			3	3	8	6	8	4	3	2
					1					
					1			1		
2	1									
1	2		4	18	36	80	66	56	30	29
3	3		4	18	36	80	66	56	30	29

d Not including 2 who work split and day tricks on alternate weeks.

e Including 1 whose age at entering service was not reported.

f Including 2 whose age at entering service was not reported.

TABLE III.—SUMMARY OF EMPLOYMENT AND WORKING CONDITIONS

A.—OCCUPATION, SEX, LENGTH OF EMPLOYMENT IN TELEPHONE SERVICE, AND AGE OF EMPLOYEES AT ENTERING SERVICE—Concluded.

INDEPENDENT TELEPHONE COMPANIES.

Occupation (all cities).	Sex.	Total employees.	Number of employees whose years of employment in telephone service were—							
			Under 1.	1 and under 2.	2 and under 3.	3 and under 4.	4 and under 5.	5 and under 7.	7 and under 10.	10 and over.
Operators, day.....	F.	12	1	3	2	2	4	.....	.....	.....
Operators, evening.....	F.	8	4	1	1	2	.....	.....	.....	.....
Operators, night.....	F.	7	4	2	.....	.....	1	.....	.....	.....
Operators, split-trick.....	F.	9	6	2	.....	.....	.....	1	.....	.....
Total operators.....	F.	36	15	8	3	4	5	1	.....	.....
Operators, chief assistant, night.....	F.	1	.....	.....	1	.....	.....	.....	.....	.....
Supervisors, day.....	F.	1	.....	.....	.....	.....	.....	1	.....	.....
Supervisors, evening.....	F.	1	.....	.....	1	.....	.....	.....	.....	.....
Total supervisors.....	F.	2	.....	.....	1	.....	.....	1	.....	.....
Total, all employees.....	F.	39	15	8	5	4	5	2	.....	.....

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

Clerks, day.....	F.	2	.....	.....	.....	2	.....	.....	.....	.....
Operators, day.....	F.	11	2	1	4	1	2	1	.....	.....
Operators, evening.....	F.	9	.....	3	1	3	.....	1	1	.....
Operators, night.....	F.	2	.....	1	1	.....	.....	.....	.....	.....
Operators, split-trick.....	F.	6	3	1	1	.....	.....	1	.....	.....
Total operators.....	F.	28	5	6	7	4	2	3	1	.....
Operators, chief, day.....	F.	1	.....	.....	.....	.....	.....	.....	.....	1
Recorders, split-trick.....	F.	1	.....	.....	.....	1	.....	.....	.....	.....
Service inspectors, day.....	F.	1	.....	.....	.....	.....	.....	.....	.....	1
Service inspectors, evening.....	F.	1	.....	.....	.....	.....	1	.....	.....	.....
Total service inspectors.....	F.	2	.....	.....	.....	.....	1	.....	.....	1
Stenographers, day.....	F.	1	.....	.....	1	.....	.....	.....	.....	.....
Supervisors, day.....	F.	2	.....	.....	.....	.....	.....	1	1	.....
Supervisors, evening.....	F.	1	.....	.....	.....	.....	.....	1	.....	.....
Total supervisors.....	F.	3	.....	.....	.....	.....	.....	2	1	.....
Ticket examiners, day.....	F.	1	.....	.....	.....	1	.....	.....	.....	.....
Total, all employees.....	F.	39	5	6	8	8	3	5	2	2

IN TELEPHONE COMPANIES, AS REPORTED BY EMPLOYEES—Continued.

A.—OCCUPATION, SEX, LENGTH OF EMPLOYMENT IN TELEPHONE SERVICE, AND AGE OF EMPLOYEES AT ENTERING SERVICE—Concluded.

INDEPENDENT TELEPHONE COMPANIES.

Number of employees whose age at entering telephone service was—

11 years and under.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years and over.
.....	1	7	1	1	1	.....	.....	1
.....	1	1	3	.....	.....	1	2	.....
.....	1	3	3	.....	.....	.....	.....	.....
.....	1	5	3	.....	.....	.....	.....
.....	3	12	12	4	1	1	2	1
.....	1	.....	.....	.....
.....	1	.....	.....	.....	.....	1	.....	.....
.....
.....	1	.....	.....	.....	.....	1	.....	.....
.....	4	12	12	4	2	2	2	1

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....
.....	.....	.....	.....	1	2	2	4	.....	.....	2
.....	.....	.....	.....	.....	1	2	1	1	2	2
.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	1	1	1	1	2
.....	.....	.....	.....	1	3	6	6	2	4	6
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....
.....	.....	.....	.....	.....	1	1	1	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
.....	.....	.....	1	1	4	9	10	3	4	7

TABLE III.—SUMMARY OF EMPLOYMENT AND WORKING CONDITIONS

B.—LUNCH TIME, RELIEF, AND NUMBER OF EMPLOYEES WORKING OVERTIME.

BELL TELEPHONE SYSTEM.

Occupation.	Total employees.	Number of employees whose time for lunch is—								
		None.	15 minutes and less.	20 minutes.	25 minutes.	30 minutes.	35 minutes.	40 minutes.	45 minutes.	60 minutes and over.
Clerks, day.....	9									9
Clerks, evening.....	2	2								
Total clerks.....	11	2								9
Matrons, day.....	1	1								
Messengers, day.....	3					1				2
Messengers, evening.....	1									1
Total messengers.....	4					1				3
Monitors, day.....	2									2
Monitors, evening.....	1									1
Monitors, split trick.....	1	1								
Total monitors.....	4	1								3
Operators, day.....	a 97					17			4	76
Operators, evening.....	c 81	23	21			9			1	27
Operators, night.....	27	2	1	1		f 16				g 7
Operators, split trick.....	62	59	1							2
Total operators.....	267	84	23	1		f 42			5	g 112
Operators, chief, day.....	4					1				3
Operators, chief, evening.....	1	1								
Operators, chief, night.....	7	1				3				7
Total operators.....	12	2				4				7
Operators, chief assistant, day.....	3					1				2
Recorders, day.....	4									4
Recorders, night.....	1					1				
Total recorders.....	5					1				4
Service observers, day.....	1					1				
Supervisors, day.....	23					7				16
Supervisors, evening.....	8	4	4							
Supervisors, night.....	2					2				
Supervisors, split trick.....	5	5								
Total supervisors.....	38	9	4			9				16
Supervisors, chief, day.....	1									1
Ticket checkers, chief, day.....	1									1
Timekeepers, day.....	1									1
All occupations, males.....	3					1				2
All occupations, females.....	346	99	27	1		o 58			5	p 156
Total, all employees.....	349	99	27	1		o 59			5	p 158

a Including 1 who works day or evening as required, and 2 who work day and split trick alternate weeks.

b Not including 1 who is indifferent and 2 not reported.

c Including 1 who works evening part of week and night part of week.

d Not including 1 not reported.

e Not including 1 not reported and 3 who are indifferent.

f Including 1 who is allowed no time for lunch on Saturdays.

g Including 2 who are allowed 2 hours, 1 who is allowed 3 hours, and 1 who is allowed 4 hours for lunch and relief combined.

h Including 2 who are allowed 2 hours, 1 allowed 3 hours, and 1 allowed 4 hours for lunch and relief combined, and also 1 who is allowed 2½ hours for relief alone, except on Saturdays, when it is curtailed to 10 minutes.

IN TELEPHONE COMPANIES, AS REPORTED BY EMPLOYEES—Continued.

B.—LUNCH TIME, RELIEF, AND NUMBER OF EMPLOYEES WORKING OVERTIME.

BELL TELEPHONE SYSTEM.

Number of employees—														
Whose time for relief is—											Whose lunch period is curtailed.	Whose relief period is curtailed.	Who ever work over-time.	Who desire over-time.
None.	15 min-utes and less.	20 min-utes.	25 min-utes.	30 min-utes.	35 min-utes.	40 min-utes.	45 min-utes.	60 min-utes and over.	At will.	On re-quest.				
1	1			5		1			1	1	3	2	2	1
1	2			5		1			1	1	3	2	2	2
1														
1				2									1	1
				1									1	
1				3									2	1
				1						1	1			
1										1	1			
1				1						2	2			
8	14	4	3	46						22	12	25	48	b 13
27	25	1	2	11						15	d 5	15	38	e 17
	2	1		3				h 21			1	d 8	7	d 1
23	13	8	2	10						6		18	31	f 11
58	54	14	7	70				h 21		43	d 18	d 66	124	j 42
3				1							1		2	(k)
				3				l 4				1	2	(k)
3				4				l 4	1		1	1	4	(m)
1				2									1	(n)
1				3				1			1	2	2	1
												1		
1				3				1			1	3	2	1
				1										
2		2		14			1	1		3	3	2	11	2
4	2	1								1				
2	2							2		1	1	1	1	1
												1	3	
8	4	3		14			1	3		5	4	4	15	3
				1									1	
1													1	
1													1	
1														
1				2									1	1
76	60	17	7	102		1	1	q 29	2	51	d 29	d 76	151	r 48
77	60	17	7	104		1	1	q 29	2	51	d 29	d 76	152	r 49

† Not including 1 who is indifferent.

j Not including 5 who are indifferent and 4 not reported.

k One not reported.

l Including 1 who is allowed 2 hours for lunch and relief combined.

m Two not reported.

n One is indifferent.

o Including 1 allowed no time for lunch on Sundays.

p Including 3 allowed 2 hours, 1 allowed 3 hours, and 1 allowed 4 hours for lunch and relief combined.

q Not including 6 who are indifferent and 6 not reported.

r Including 3 allowed 2 hours, 1 allowed 3 hours, and 1 allowed 4 hours for lunch and relief combined, and also 1 allowed 2½ hours for relief alone, except on Saturdays, when it is curtailed to 10 minutes.

TABLE III.—SUMMARY OF EMPLOYMENT AND WORKING CONDITIONS

B.—LUNCH TIME, RELIEF, AND NUMBER OF EMPLOYEES WORKING OVERTIME—
Concluded.

INDEPENDENT TELEPHONE COMPANIES.

Occupation.	Total employees.	Number of employees whose time for lunch is—								
		None.	15 minutes and less.	20 minutes.	25 minutes.	30 minutes.	35 minutes.	40 minutes.	45 minutes.	60 minutes and over.
Operators, day	12								8	4
Operators, evening	8	1				4			1	2
Operators, night	7					1				a 6
Operators, split trick	9	9								
Total operators	36	10				5			9	a 12
Operators, chief assistant, night	1									1
Supervisors, day	1									1
Supervisors, evening	1									1
Total supervisors	2									2
Total, all employees	39	10				5			9	a 15

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

Clerks, day	2									2
Operators, day	11					5		1		5
Operators, evening	9	4				3				2
Operators, night	2					2				
Operators, split trick	6	6								
Total operators	28	10				10		1		7
Operators, chief, day	1									1
Recorders, split trick	1	1								
Service inspectors, day	1					1				
Service inspectors, evening	1			1						
Total service inspectors	2			1		1				
Stenographers, day	1									1
Supervisors, day	2									2
Supervisors, evening	1	1								
Total supervisors	3	1								2
Ticket examiners, day	1									1
Total, all employees	39	12		1		11		1		14

a Including 1 who is allowed one hour for lunch and relief combined.

IN TELEPHONE COMPANIES, AS REPORTED BY EMPLOYEES—Continued.

B.—LUNCH TIME, RELIEF, AND NUMBER OF EMPLOYEES WORKING OVERTIME—
Concluded.**INDEPENDENT TELEPHONE COMPANIES.**

Number of employees—														
Whose time for relief is—											Whose lunch period is curtailed.	Whose relief period is curtailed.	Who ever work over-time.	Who desire over-time.
None.	15 minutes and less.	20 min-utes.	25 min-utes.	30 min-utes.	35 min-utes.	40 min-utes.	45 min-utes.	60 min-utes and over.	At will.	On-re-quest.				
.....	9	.....	.....	2	.....	.....	.....	.....	.....	1	6	8	7	.....
.....	2	4	.....	.....	.....	.....	.....	.....	1	1	.....	5	5	1
1	4	.....	.....	.....	.....	.....	.....	a 1	.....	1	.....	1	1	2
2	4	2	.....	1	.....	.....	.....	.....	.....	.....	.....	3	7	5
3	19	6	.....	3	.....	.....	.....	a 1	1	3	6	17	20	8
.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	1
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	1
3	20	6	.....	4	.....	.....	.....	a 2	1	3	6	17	21	9

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

1				1						1		1	
4				7						b 3	4	4	
6				2					1		1	1	1
2												1	
6												2	c 1
18				9					1	b 3	5	8	c 2
1													
1												1	1
				1									
1				1									
								1					
1				1									
				1									
				2									
				1									
23				14				1	1	b 4	5	10	c 3

^b Including 1 who is allowed time off at close of day when lunch time is curtailed.^c Not including 1 who is indifferent.

TABLE III.—SUMMARY OF EMPLOYMENT AND WORKING CONDITIONS

C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK, HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT HOME OR BOARD AND WHO RIDE OR WALK TO WORK.

BELL TELEPHONE SYSTEM.

Occupation.	Total employees.	Number of employees whose maximum length of overtime day (in hours) is—							
		Under 7.	7 and under 8.	8 and under 9.	9 and under 10.	10 and under 11.	11 and under 12.	12 and under 15.	15 and over.
Clerks, day.....	9						1	1	
Clerks, evening.....	2								
Total clerks.....	11						1	1	
Matrons, day.....	1								
Messengers, day.....	3						1		
Messengers, evening.....	1				1				
Total messengers.....	4				1		1		
Monitors, day.....	2								
Monitors, evening.....	1								
Monitors, split trick.....	1								
Total monitors.....	4								
Operators, day.....	^a 97				4	12	14	16	2
Operators, evening.....	^g 81	3	2	1	5	8	1	18	
Operators, night.....	27	(ⁿ)	(ⁿ)	^o 2	^o 2	^o 1	(ⁿ)	^o 1	(ⁿ)
Operators, split trick.....	62	(ⁿ)	(ⁿ)	^o 4	^o 1	^o 10	^o 7	^o 8	(ⁿ)
Total operators.....	267	^t 3	^t 2	^t 7	^t 12	^t 31	^t 22	^t 43	^t 2
Operators, chief, day.....	4							2	
Operators, chief, evening.....	1								
Operators, chief, night.....	7			1				1	
Total operators, chief.....	12			1				3	
Operators, chief, assistant, day.....	3							1	
Recorders, day.....	4							2	
Recorders, night.....	1								
Total recorders.....	5							2	
Service observers, day.....	1								
Supervisors, day.....	23			1	1	3	3	3	
Supervisors, evening.....	8								
Supervisors, night.....	2							1	
Supervisors, split-trick.....	5					1	2		
Total supervisors.....	38			1	1	4	5	4	

^a Including 2 who work day and split trick alternate weeks and 1 who works day or evening as required.^b Not including 1 not reported.^c Including 1 who lives with aunt and pays no board and 1 who does light housekeeping with another girl.^d Including 2 who board at home.^e Including 1 who walks part of way only, but not including 2 not reported.^f Including 3 who ride one way only, but not including 2 not reported.^g Including 1 who works evening part of week and night part of week.^h Not including 2 not reported.ⁱ Not including 3 not reported.^j Including 1 who does light housekeeping with another girl, but not including 1 not reported.^k Including 1 who boards at home, but not including 1 not reported.^l Including 1 who walks 3 trips and rides 1, but not including 1 not reported.^m Including 5 who ride one way only, but not including 1 not reported.ⁿ One works overtime, hours not reported.^o Not including 1 who works overtime, hours not reported.

IN TELEPHONE COMPANIES, AS REPORTED BY EMPLOYEES—Continued.

C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK, HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT HOME OR BOARD AND WHO RIDE OR WALK TO WORK.

BELL TELEPHONE SYSTEM.

Number of employees—										
Who have ever been given any choice—		Who report health affected—		Having operating set—			Living at home.	Boarding.	Walking to and from home.	Riding to and from home.
In-exchange to which sent.	Of shift.	Injuri-ously.	Benefi-cially.	For indi-vidual use.	Disin-fected regu-larly.	Disin-fected at pleasure.				
3 1	2 1	3	1	5 1	2 1	4 1	8 2	1	5	4 2
4	3	3	1	6	3	5	10	1	5	6
							1			1
							2 1	1		3 1
							3	1		4
	1	1		2 1 1		2	1 1 1	1	1 1	1
	1	1		4		2	3	1	3	1
11 b 15 1 13	21 16 13 3	26 b 15 10 18		95 b 78 25 60	b 42 h 23 7 9	b 46 i 48 12 27	c 89 f 71 p 25 54	d 8 k 9 2 r 8	e 41 i 28 11 b 34	f 54 m 52 g 16 s 27
b 40	53	b 69	2	b 258	i 81	u 133	v 239	w 27	x 114	y 149
2 1 3	2 1 2			3 1 7	1 1 2	2 1 4	3 1 6	1 r 1	1 2	3 5
6	5	1		11	4	6	10	r 2	4	8
1 1	2 1 1			3 4 1	2 3 1	1 2 1	3 2 1		1 2 1	2 2 z 1
1	2			5	3	3	2	3	2	z 3
				1				1		1
4 3 1	9 6 1	4 1 1 3		21 8 2 4	7 4 1 1	16 7 1 2	19 6 1 5	4 2 1	6 1 5	q 17 7 z 2
8	16	9		35	12	26	31	7	12	aa 26

p Including 1 who does light housekeeping with another girl.

q Including 2 who ride one way only.

r Including 1 who boards at home.

s Including 4 who ride one way only, but not including 1 not reported.

t Not including 2 who work overtime, hours not reported.

u Not including 4 not reported.

v Including 1 who lives with aunt and pays no board and 3 who do light housekeeping, but not including 1 not reported.

w Including 4 who board at home, but not including 1 not reported.

x Including 1 who walks part of way only and 1 who walks 3 trips and rides 1, but not including 4 not reported.

y Including 14 who ride one way only, but not including 4 not reported.

z Including 1 who rides one way only.

aa Including 3 who ride one way only.

TABLE III.—SUMMARY OF EMPLOYMENT AND WORKING CONDITIONS

C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK, HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT HOME OR BOARD AND WHO RIDE OR WALK TO WORK—Continued.

BELL TELEPHONE SYSTEM—Concluded.

Occupation.	Total employees.	Number of employees whose maximum length of overtime day (in hours) is—							
		Under 7.	7 and under 8.	8 and under 9.	9 and under 10.	10 and under 11.	11 and under 12.	12 and under 15.	15 and over.
Supervisors, chief, day.....	1	.....	.....	.....	1	.....	.....	.....	.....
Ticket checkers, chief, day..	1	.....	.....	.....	.....	.....	1	.....	.....
Timekeepers, day.....	1	.....	.....	.....	.....	.....	.....	.....	.....
All occupations, males.....	3	.....	.....	.....	.....	.....	1	.....	.....
All occupations, females....	346	b 3	b 2	b 9	b 15	b 35	b 29	b 54	b 2
Total, all employees...	349	b 3	b 2	b 9	b 15	b 35	b 30	b 54	b 2

INDEPENDENT TELEPHONE COMPANIES.

Operators, day.....	12	.....	.....	.....	.....	3	4	.....	.....
Operators, evening.....	8	.....	.....	4	.....	1	.....	.....	.....
Operators, night.....	7	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Operators, split trick.....	9	.....	.....	2	3	.....	.....	1	1
Total operators.....	36	(m)	(m)	o 6	o 3	o 4	o 4	o 1	o 1
Operators, chief, assistant, night.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors, day.....	1	.....	.....	.....	.....	.....	.....	1	.....
Supervisors, evening.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Total supervisors.....	2	.....	.....	.....	.....	.....	.....	1	.....
Total, all employees...	39	(m)	(m)	o 6	o 3	o 4	o 4	o 2	o 1

a With married sister.

b Not including 2 who work overtime, hours not reported.

c Not including 1 not reported.

d Not including 3 not reported.

e Not including 4 not reported.

f Including 1 who lives with aunt and pays no board and 3 who do light housekeeping, but not including 1 not reported.

g Including 3 who board at home, but not including 1 not reported.

h Including 1 who walks part of way only and 1 who walks 3 trips and rides 1, but not including 4 not reported.

i Including 18 who ride one way only, but not including 4 not reported.

IN TELEPHONE COMPANIES, AS REPORTED BY EMPLOYEES—Continued.

C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK, HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT HOME OR BOARD AND WHO RIDE OR WALK TO WORK—Continued.

BELL TELEPHONE SYSTEM—Concluded.

Number of employees.										
Who have ever been given any choice.		Who report health affected.		Having operating set.			Living at home.	Boarding.	Walking to and from home.	Riding to and from home.
In exchange to which sent.	Of shift.	Injurious.	Beneficially.	For individual use.	Disinfected regularly.	Disinfected at pleasure.				
				1		1	1		1	
	1						1	1		1
c 60	83	c 83	3	c 324	d 105	e 177	f 302	g 43	h 142	i 200
c 60	83	c 83	3	c 324	d 105	e 177	f 304	g 44	h 142	i 203

INDEPENDENT TELEPHONE COMPANIES.

4	4	2	.....	12	9	.....	12	.....	9	k 3
3	2	2	.....	8	6	.....	8	.....	c 2	l 5
.....	3	4	.....	5	c 4	1	6	1	4	k 3
3	2	2	.....	7	5	3	9	.....	4	n 5
10	11	10	.....	32	c 24	4	35	1	c 19	p 16
.....	1	1	.....	1	1	.....	1	.....	1	.....
.....	.....	.....	.....	1	1	.....	1	.....	(g)	(g)
.....	.....	.....	.....	1	.....	.....	1	.....	.....	1
.....	.....	.....	.....	2	1	.....	2	.....	(g)	c 1
10	12	11	.....	35	c 26	4	38	1	r 20	s 17

j Including 8 who board at home and 1 who boards with married sister, but not including 1 not reported.

k Including 1 who rides one way only.

l Including 2 who ride one way only, but not including 1 not reported.

m One works overtime, hours not reported.

n Including 2 who ride one way only.

o Not including 1 who works overtime, hours not reported.

p Including 6 who ride one way only, but not including 1 not reported.

q One not reported.

r Not including 2 not reported.

s Including 6 who ride one way only, but not including 2 not reported.

TABLE III.—SUMMARY OF EMPLOYMENT AND WORKING CONDITIONS

C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK, HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT HOME OR BOARD AND WHO RIDE OR WALK TO WORK—Concluded.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

Occupation.	Total employees.	Number of employees whose maximum length of overtime day (in hours) is—							
		Under 7.	7 and under 8.	8 and under 9.	9 and under 10.	10 and under 11.	11 and under 12.	12 and under 15.	15 and over.
Clerks, day.....	2	.....	.....	.....	1	.....	.....	.....	.....
Operators, day.....	11	.....	.....	.....	1	.....	.....	3	.....
Operators, evening.....	9	.....	.....	.....	.....	.....	1	.....	.....
Operators, night.....	2	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Operators, split trick.....	6	.....	.....	.....	1	.....	.....	1	.....
Total operators.....	28	(c)	(c)	(c)	e 2	(c)	e 1	e 4	(c)
Operators, chief, day.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Recorders, split trick.....	1	.....	1	.....	.....	.....	.....	.....	.....
Service inspectors, day.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Service inspectors, evening..	1	.....	.....	.....	.....	.....	.....	.....	.....
Total service inspectors.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers, day.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors, day.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors, evening.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Total supervisors.....	3	.....	.....	.....	.....	.....	.....	.....	.....
Ticket examiners, day.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Total, all employees...	39	(c)	e 1	(c)	e 3	(c)	e 1	e 4	(c)

a Not including 1 not reported.

b Including 1 who boards at home.

c One works overtime, hours not reported.

d Not including 2 who report transmitter disinfected regularly and receiver disinfected at pleasure.

e Not including 1 who works overtime, hours not reported.

f Not including 2 who report transmitter disinfected regularly and receiver disinfected at pleasure, and 1 not reported.

IN TELEPHONE COMPANIES, AS REPORTED BY EMPLOYEES—Concluded.

C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK, HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT HOME OR BOARD AND WHO RIDE OR WALK TO WORK—Concluded.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

Number of employees.										
Who have ever been given any choice.		Who report health affected.		Having operating set.			Living at home.	Boarding.	Walking to and from home.	Riding to and from home.
In exchange to which sent.	Of shift.	Injurious.	Beneficially.	For individual use.	Disinfected regularly.	Disinfected at pleasure.				
							2			2
1	2	3		11	5	8	7	4	1	10
2	1	1		9	8	a 4	8	b 1		9
	1	1		2	2		2			2
1		1		6	d 3	d 2	5	1	a 2	a 3
4	4	7		28	d 18	f 14	22	b 6	a 3	a 24
	1			(g)			1			1
1				1	1		1		1	
				1	1			1		1
				(g)	(g)	(g)	1			1
				a 1	a 1	(g)	1	1		2
							1			1
1	1			2	2	1	2		1	1
				1	1	1		b 1		1
1	1			3	3	2	2	b 1	1	2
				1		1	1			1
6	6	7		h 34	f 23	i 17	31	j 8	a 5	a 23

g One not reported.

h Not including 2 not reported.

i Not including 2 who report transmitter disinfected regularly, receiver disinfected at pleasure, and 2 not reported.

j Including 2 who board at home.

TABLE IV.—SUMMARY, FOR ALL TELEPHONE COMPANIES, OF EMPLOY
A.—OCCUPATION, SEX, LENGTH OF EMPLOYMENT IN TELEPHONE SERVICE, AND
AGE OF EMPLOYEES AT ENTERING SERVICE.

Occupation.	Sex.	Total em- ploy- ees.	Number of employees whose years of employment in telephone service were—							
			Un- der 1.	1 and under 2.	2 and under 3.	3 and under 4.	4 and under 5.	5 and under 7.	7 and under 10.	10 and over.
Clerks, day.....	F.	11	.....	1	.....	7	1	1	.....	1
Clerks, evening.....	F.	2	.....	.....	1	.....	.....	.....	1	.....
Total clerks.....	F.	13	.....	1	1	7	1	1	1	1
Matron, day.....	F.	1	.....	.....	.....	.....	.....	.....	.....	1
Messengers, day.....	M.	3	1	.....	1	.....	1	.....	.....	.....
Messengers, evening.....	F.	1	.....	1	.....	.....	.....	.....	.....	.....
Total messengers.....	F.	4	1	1	1	.....	1	.....	.....	.....
Monitors, day.....	F.	2	.....	.....	.....	1	.....	1	.....	.....
Monitors, evening.....	F.	1	.....	.....	1	.....	.....	.....	.....	.....
Monitors, split trick.....	F.	1	.....	.....	1	.....	.....	.....	.....	.....
Total monitors.....	F.	4	.....	.....	2	1	.....	1	.....	.....
Operators, day.....	F.	<i>a</i> 120	13	30	26	18	14	14	4	1
Operators, evening.....	F.	<i>b</i> 98	42	20	14	10	3	4	5	.....
Operators, night.....	F.	<i>c</i> 36	11	10	7	2	4	2	.....	.....
Operators, split trick.....	F.	<i>d</i> 77	17	29	17	5	4	5	.....	.....
Total operators.....	F.	<i>e</i> 331	83	89	64	35	25	25	9	1
Operators, chief, day.....	F.	5	.....	.....	.....	.....	.....	.....	1	4
Operators, chief, evening.....	F.	1	.....	.....	.....	1	.....	.....	.....	.....
Operators, chief, night.....	F.	7	.....	.....	1	1	1	2	2	.....
Total operators, chief.....	F.	13	.....	.....	1	2	1	2	3	4
Operators, chief assistant, day.....	F.	3	.....	.....	.....	.....	.....	.....	2	1
Operators, chief assistant, night.....	F.	1	.....	.....	1	.....	.....	.....	.....	.....
Total operators, chief assist- ant.....	F.	4	.....	.....	1	.....	.....	.....	2	1
Recorders, day.....	F.	4	.....	1	2	.....	.....	.....	.....	1
Recorders, night.....	F.	1	.....	.....	.....	.....	.....	.....	1	.....
Recorders, split trick.....	F.	1	.....	.....	.....	1	.....	.....	.....	.....
Total recorders.....	F.	6	.....	1	2	1	.....	.....	1	1
Service inspectors, day.....	F.	2	.....	.....	.....	.....	.....	1	.....	1
Service inspectors, evening.....	F.	1	.....	.....	.....	.....	1	.....	.....	.....
Total service inspectors.....	F.	3	.....	.....	.....	.....	1	1	.....	1
Stenographers, day.....	F.	1	.....	.....	1	.....	.....	.....	.....	.....
Supervisors, day.....	F.	26	.....	1	2	.....	7	8	4	4
Supervisors, evening.....	F.	<i>e</i> 10	.....	.....	2	.....	3	2	2	1
Supervisors, night.....	F.	2	.....	.....	.....	1	.....	.....	1	.....
Supervisors, split trick.....	F.	5	1	.....	.....	.....	.....	3	1	.....
Total supervisors.....	F.	<i>e</i> 43	1	1	4	1	10	13	8	5
Supervisors, chief, day.....	F. ^g	1	.....	.....	.....	.....	.....	.....	.....	1
Ticket checkers, chief, day.....	F.	1	.....	.....	.....	.....	.....	.....	1	.....
Ticket examiners, day.....	F.	1	.....	.....	.....	1	.....	.....	.....	.....
Timekeepers, day.....	F.	1	.....	.....	.....	.....	.....	1	.....	.....
All occupations, males.....	.....	3	1	.....	1	.....	1	.....	.....	.....
All occupations, females.....	<i>f</i> 424	84	93	76	48	38	44	25	16	.....
Total, all employees.....	<i>g</i> 427	85	93	77	48	39	44	25	16	.....

^a Including 2 who work day and split trick alternate weeks, also 1 who works day or evening trick as required, and 1 whose age at entering service not reported.

^b Including 1 who works evening part of week and night part of week.

^c Not including 1 who works night trick part of week and evening trick part of week.

MENT AND WORKING CONDITIONS, AS REPORTED BY EMPLOYEES.

A.—OCCUPATION, SEX, LENGTH OF EMPLOYMENT IN TELEPHONE SERVICE, AND AGE OF EMPLOYEES AT ENTERING SERVICE.

Number of employees whose age at entering telephone service was—										
11 years and under.	12 years.	13 years.	14 years.	15 years.	16 years.	17 years.	18 years.	19 years.	20 years.	21 years and over.
			2	1	2	2		1	1	2
							1			1
			2	1	2	2	1	1	1	3
										1
2	1									
2	2									
								1	1	
						1				
						1				
						2		1	1	
	1	4	9	24	22	22	21	4	3	9
			4	8	27	12	19	9	13	6
			1	4	9	9	3	5	3	2
1			3	8	21	22	6	4	4	8
1	1	4	17	44	79	65	49	22	23	25
				1	2		2			
							1			
						1	2	2		2
				1	2	1	5	2		2
							1	1		1
							1			
							2	1		1
					2					2
							1			
					2		1	1		2
						2				
							1			
						2	1			
										1
			3	3	6	3	5	2	3	1
					1	3	1	3		1
					1	1				
			1		1		3			
			4	3	9	7	9	5	3	2
					1					
					1			1		
2	1									
1	2	4	23	49	96	79	68	35	28	37
3	3	4	23	49	96	79	68	35	28	37

d Not including 2 who work split and day tricks on alternate weeks.

e Including 1 whose age at entering service was not reported.

f Including 2 whose age at entering service was not reported.

TABLE IV.—SUMMARY FOR ALL TELEPHONE COMPANIES OF EMPLOYEES—

B.—LUNCH TIME, RELIEF, AND NUMBER OF EMPLOYEES WORKING OVERTIME.

Occupation.	Total employees.	Number of employees whose time for lunch is—								
		None.	15 minutes and less.	20 minutes.	25 minutes.	30 minutes.	35 minutes.	40 minutes.	45 minutes.	60 minutes and over.
Clerks, day.....	11									11
Clerks, evening.....	2	2								
Total clerks.....	13	2								11
Matrons, day.....	1	1								
Messengers, day.....	3					1				2
Messengers, evening.....	1									1
Total messengers.....	4					1				3
Monitors, day.....	2									2
Monitors, evening.....	1									1
Monitors, split trick.....	1	1								
Total monitors.....	4	1								3
Operators, day.....	^a 120					22		1	12	85
Operators, evening.....	^d 98	28	21			16			2	31
Operators, night.....	36	2	1	1		^g 19				^h 13
Operators, split trick.....	77	74	1							2
Total operators.....	331	104	23	1		^g 57		1	14	^h 131
Operators, chief, day.....	5					1				4
Operators, chief, evening.....	1	1								
Operators, chief, night.....	7	1				3				ⁿ 3
Total operators, chief.....	13	2				4				ⁿ 7
Operators, chief, assistant, day.....	3					1				2
Operators, chief, assistant, night.....	1									1
Total operators, chief, assistant.....	4					1				3
Recorders, day.....	4									4
Recorders, night.....	1					1				
Recorders, split trick.....	1	1								
Total recorders.....	6	1				1				4
Service inspectors, day.....	2					2				
Service inspectors, evening.....	1			1						
Total service inspectors.....	3			1		2				
Stenographers, day.....	1									1
Supervisors, day.....	26					7				19
Supervisors, evening.....	10	5	4							1
Supervisors, night.....	2					2				
Supervisors, split trick.....	5	5								
Total supervisors.....	43	10	4			9				20

^a Including 1 who works day or evening as required, and 2 who work day and split tricks alternate weeks.^b Including 1 who is allowed time off at close of day when lunch time is curtailed.^c Not including 1 who is indifferent, and 2 not reported.^d Including 1 who works evening part of week and night part of week.^e Not including 1 not reported.^f Not including 3 who are indifferent and 1 not reported.^g Including 1 who is allowed no time for lunch on Saturdays.^h Including 1 who is allowed 1 hour, 2 allowed 2 hours, 1 allowed 3 hours, and 1 allowed 4 hours for lunch and relief combined.ⁱ Including 1 who is allowed 1 hour, 2 allowed 2 hours, 1 allowed 3 hours, and 1 allowed 4 hours for lunch and relief combined, and also 1 who is allowed 2½ hours for relief alone except on Saturdays when it is curtailed to 10 minutes.

EMPLOYMENT AND WORKING CONDITIONS, AS REPORTED BY
Continued.

B.—LUNCH TIME, RELIEF, AND NUMBER OF EMPLOYEES WORKING OVERTIME.

Number of employees—													
Whose time for relief is—											Whose lunch period is curtailed.	Whose relief period is curtailed.	Who ever worked overtime.
None.	15 minutes and less.	20 minutes.	25 minutes.	30 minutes.	35 minutes.	40 minutes.	45 minutes.	60 minutes and over.	At will.	On request.			Who desire overtime.
2	1			6		1			1		4	2	3
	1									1			1
2	2			6		1			1	1	4	2	3
1													
1				2									1
				1									1
1				3									2
				1						1	1		
1										1	1		
1				1						2	2		
12	23	4	3	55						23	b 21	37	59
33	27	5	2	13					1	17	c 5	21	44
3	6	1		3						1	1	e 9	9
31	17	10	2	11				i 22		6		21	40
79	73	20	7	82				i 22	1	47	k 27	e 88	152
4				1							1		2
				3				n 4	1			1	2
4				4				n 4	1		1	1	4
1				2									1
				1									
1				3									1
1				3									
1								1			1	2	2
1												1	1
2				3				1			1	3	3
				2									
1													
1				2									
									1				
3		2		15			1	2		3	3	2	11
4	3	1		1						1			
2	2							2			1	1	1
										1			3
9	5	3		16			1	4		5	4	4	15

j Not including 2 who are indifferent.

k Including 1 who is allowed time off at close of day when lunch time is curtailed, but not including 1 not reported.

l Not including 6 who are indifferent, and 4 not reported.

m One not reported.

n Including 1 who is allowed 2 hours for lunch and relief combined.

o Two not reported.

p One is indifferent.

TABLE IV.—SUMMARY, FOR ALL TELEPHONE COMPANIES, OF EMPLOYEES—

B.—LUNCH TIME, RELIEF, AND NUMBER OF EMPLOYEES WORKING OVERTIME—
Concluded.

Occupation.	Total employees.	Number of employees whose time for lunch is—								
		None.	15 minutes and less.	20 minutes.	25 minutes.	30 minutes.	35 minutes.	40 minutes.	45 minutes.	60 minutes and over.
Supervisors, chief, day	1									1
Ticket checkers, chief, day	1									1
Ticket examiners, day	1									1
Timekeepers, day	1									1
All occupations, males	3					1				2
All occupations, females	424	121	27	2		a 74		1	14	b 185
Total, all employees.....	427	121	27	2		a 75		1	14	b 187

a Including 1 who is allowed no time for lunch on Saturdays.

b Including 1 who is allowed one hour, 3 allowed two hours, 1 allowed three hours, and 1 allowed four hours for lunch and relief combined.

c Including 1 who is allowed one hour, 3 allowed two hours, 1 allowed three hours, and 1 allowed four hours for lunch and relief combined, and also 1 who is allowed two and a half hours for relief, except on Saturdays, when it is curtailed to ten minutes.

C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK, HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT HOME OR BOARD AND WHO RIDE OR WALK TO WORK.

Occupation.	Total employees.	Number of employees whose maximum length of overtime day (in hours) is—							
		Under 7.	7 and under 8.	8 and under 9.	9 and under 10.	10 and under 11.	11 and under 12.	12 and under 15.	15 and over.
Clerks, day	11				1		1	1	
Clerks, evening	2								
Total clerks	13				1		1	1	
Matrons, day	1								
Messengers, day	3						1		
Messengers, evening	1				1				
Total messengers	4				1		1		
Monitors, day	2								
Monitors, evening	1								
Monitors, split trick	1								
Total monitors	4								

a With married sister.

EMPLOYMENT AND WORKING CONDITIONS, AS REPORTED BY
Continued.**B.—LUNCH TIME, RELIEF, AND NUMBER OF EMPLOYEES WORKING OVERTIME—**
Concluded.

Number of employees—														
Whose time for relief is—											Whose lunch period is curtailed.	Whose relief period is curtailed.	Who ever worked over-time.	Who desire over-time.
None.	15 minutes and less.	20 minutes.	25 minutes.	30 minutes.	35 minutes.	40 minutes.	45 minutes.	60 minutes and over.	At will.	On request.				
1				1									1	
1				1									1	
102	80	23	7	120		1	1	e 31	4	55	d 39	e 98	181	f 60
103	80	23	7	122		1	1	e 31	4	55	d 39	e 98	182	f 61

d Including 1 who is allowed time off at close of day when lunch time is curtailed, but not including 1 not reported.

e Not including 1 not reported.

f Not including 7 who are indifferent and 6 not reported.

C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK, HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT HOME OR BOARD AND WHO RIDE OR WALK TO WORK.

Number of employees—										
Who have ever been given any choice—		Who report health affected—		Having operating set—			Living at home.	Boarding.	Walking to and from home.	Riding to and from home.
In exchange to which sent.	Of shift.	Injuri-ously.	Bene-ficially.	For indi-vidual use.	Disin-fected regu-larly.	Disin-fected at pleas-ure.				
3	2	3	1	5	2	4	10	1	5	6
1	1			1	1	1	2			2
4	3	3	1	6	3	5	12	1	5	8
							1			1
							2	a 1		3
							1			1
							3	a 1		4
	1	1		2		2	1	b 1	1	1
				1			1		1	
				1			1		1	
	1	1		4		2	3	b 1	3	1

b At home.

TABLE IV.—SUMMARY, FOR ALL TELEPHONE COMPANIES, OF EMPLOYEES—

C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK, HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT HOME OR BOARD AND WHO RIDE OR WALK TO WORK—Continued.

Occupation.	Total employees.	Number of employees whose maximum length of overtime day (in hours) is—							
		Under 7.	7 and under 8.	8 and under 9.	9 and under 10.	10 and under 11.	11 and under 12.	12 and under 15.	15 and over.
Operators, day.....	^a 120				5	15	18	19	2
Operators, evening.....	^g 98	3	2	5	5	9	2	18	
Operators, night.....	36	(ⁿ)	(ⁿ)	^o 2	^o 2	^o 1	(ⁿ)	^o 1	(ⁿ)
Operators, split-trick.....	77	(^r)	(^r)	^s 6	^s 5	^s 10	^s 7	^s 10	^s 1
Total operators.....	331	<i>w</i> 3	<i>w</i> 2	<i>w</i> 13	<i>w</i> 17	<i>w</i> 35	<i>w</i> 27	<i>w</i> 48	<i>w</i> 3
Operators, chief, day.....	5							2	
Operators, chief, evening.....	1								
Operators, chief, night.....	7			1				1	
Total operators, chief.....	13			1				3	
Operators, chief, assistant, day.....	3							1	
Operators, chief, assistant, night.....	1								
Total operators, chief, assistant.....	4							1	
Recorders, day.....	4							2	
Recorders, night.....	1								
Recorders, split trick.....	1		1						
Total recorders.....	6		1					2	
Service inspectors, day.....	1								
Service inspectors, evening.....	1								
Total service inspectors.....	2								
Service observers, day.....	1								
Stenographers, day.....	1								

^a Including 2 who work day and split tricks alternate weeks and 1 who works day or evening as required.^b Not including 1 not reported.^c Including 1 who lives with aunt and pays no board and 1 who does light housekeeping with another girl.^d Including 2 who board at home.^e Including 1 who walks part of way only, but not including 2 not reported.^f Including 4 who ride one way only, but not including 2 not reported.^g Including 1 who works evening part of week and night part of week.^h Not including 2 not reported.ⁱ Not including 4 not reported.^j Including 1 who does light housekeeping with another girl, but not including 1 not reported.^k Including 2 who board at home, but not including 1 not reported.^l Including 1 who walks 3 trips and rides one, but not including 2 not reported.^m Including 7 who ride one way only, but not including 2 not reported.ⁿ Three work overtime, hours not reported.^o Not including 3 who work overtime, hours not reported.^p Including 1 who does light housekeeping with another girl.^q Including 3 who ride one way only.

EMPLOYMENT AND WORKING CONDITIONS, AS REPORTED BY
Continued.C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK,
HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT
HOME OR BOARD AND WHO RIDE OR WALK TO WORK—Continued.

Number of employees—										
Who have ever been given any choice—		Who report health affected—		Having operating set—			Living at home.	Boarding.	Walking to and from home.	Riding to and from home.
In-exchange to which sent.	Of shift.	Injuri-ously.	Bene-ficially.	For indi-vidual use.	Disin-fected regu-larly.	Disin-fected at pleas-ure.				
16 b 20 1 17	27 19 17 5	31 b 19 15 21	..... 1 1	118 b 95 32 73	b 56 h 37 b 13 t 17	b 54 t 32 13 t 32	c 108 j 87 p 33 68	d 12 k 10 3 u 9	e 51 t 30 15 h 40	f 67 m 66 g 21 v 35
b 54	68	b 86	2	b 378	x 123	y 151	z 296	aa 34	bb 136	cc 189
2 1 3	3 1 2	..... ..... 1	..... ..... .....	b 3 1 7	1 1 2	2 4	4 1 6	1 u 1	1 1 2	4 5
6	6	1	.....	b 11	4	6	11	u 2	4	9
1	2	.....	.....	3	2	1	3	.....	1	2
.....	1	1	.....	1	1	.....	1	.....	1	.....
1	3	1	.....	4	3	1	4	.....	2	2
1 1	1 1 .....	..... ..... .....	..... ..... .....	4 1 1	3 1	2 1	2 1	2 1	2 1	2 dd 1
2	2	.....	.....	6	4	3	3	3	3	dd 3
.....	.....	.....	.....	(ee) 1	(ee) 1	(ee) 1	.....	1	.....	1
.....	.....	.....	.....	.....	.....	.....	1	1	.....	2
.....	.....	.....	.....	1	.....	.....	1	u 1	.....	1
.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1

r On e works overtime, hours not reported.

s Not including 1 who works overtime, hours not reported.

t Not including 2 who report transmitter disinfected regularly and receiver disinfected at pleasure.

u Including 1 who boards at home.

v Including 6 who ride one way only, but not including 2 not reported.

w Not including 4 who work overtime, hours not reported.

x Not including 2 who report transmitter disinfected regularly and receiver disinfected at pleasure, and 4 not reported.

y Not including 2 who report transmitter disinfected regularly and receiver disinfected at pleasure, and 5 not reported.

z Including 1 who lives with aunt and pays no board and 3 who do light housekeeping with other girls, but not including 1 not reported.

aa Including 5 who board at home, but not including 1 not reported.

bb Including 1 who walks part of way only and 1 who walks 3 trips and rides one, but not including 6 not reported.

cc Including 20 who ride one way only, but not including 6 not reported.

dd Including 1 who rides one way only.

ee One not reported.

TABLE IV.—SUMMARY, FOR ALL TELEPHONE COMPANIES, OF
EMPLOYEES—C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK,
HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT
HOME OR BOARD AND WHO RIDE OR WALK TO WORK—Concluded.

Occupation.	Total employees.	Number of employees whose maximum length of overtime day (in hours) is—							
		Under 7.	7 and under 8.	8 and under 9.	9 and under 10.	10 and under 11.	11 and under 12.	12 and under 15.	15 and over.
Supervisors, day.....	26	.....	.....	1	1	3	3	4	.....
Supervisors, evening.....	10	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors, night.....	2	.....	.....	.....	.....	.....	.....	1	.....
Supervisors, split trick.....	5	.....	.....	.....	.....	1	2	.....	.....
Total supervisors.....	43	.....	.....	1	1	4	5	5	.....
Supervisors, chief, day.....	1	.....	.....	.....	1	.....	.....	.....	.....
Ticket checkers, chief, day..	1	.....	.....	.....	.....	.....	.....	.....	.....
Ticket examiners, day.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Timekeepers, day.....	1	.....	.....	.....	.....	.....	1	.....	.....
All occupations, males.....	3	.....	.....	.....	.....	.....	1	.....	.....
All occupations, females.....	424	h 3	h 3	h 15	h 21	h 39	h 34	h 60	h 3
Total, all employees...	427	h 3	h 3	h 15	h 21	h 39	h 35	h 60	h 3

a Including 1 who boards at home.*b* Not including 1 not reported.*c* Including 2 who ride one way only, but not including 1 not reported.*d* Including 1 who rides one way only.*e* Including 2 who board at home.*f* Including 3 who ride one way only, but not including 1 not reported.*g* With married sister.*h* Not including 3 who work overtime, hours not reported,*j* Not including 3 not reported.*j* Not including 2 who report transmitter disinfected regularly and receiver disinfected at pleasure, and 5 not reported.

EMPLOYMENT AND WORKING CONDITIONS, AS REPORTED BY
Concluded.C.—LENGTH OF OVERTIME DAY, CHOICE OF EXCHANGE AND HOURS OF WORK,
HEALTH, CARE OF OPERATING SET, AND NUMBER OF EMPLOYEES WHO LIVE AT
HOME OR BOARD AND WHO RIDE OR WALK TO WORK—Concluded.

Number of employees—										
Who have ever been given any choice—		Who report health affected—		Having operating set—			Living at home.	Board- ing.	Walk- ing to and from home.	Riding to and from home.
In ex- change to which sent.	Of shift.	Injuri- ously.	Bene- ficially.	For indi- vidual use.	Disin- fected regu- larly.	Disin- fected at pleas- ure.				
5	10	4	-----	24	10	17	22	a 4	b 7	c 18
3	6	1	-----	10	5	8	7	a 3	1	9
-----	1	1	-----	2	-----	1	1	1	-----	d 2
1	-----	3	-----	4	1	2	5	-----	5	-----
9	17	9	-----	40	16	28	35	e 8	b 13	f 29
-----	-----	-----	-----	1	-----	1	1	-----	1	-----
-----	-----	-----	-----	1	-----	1	1	-----	-----	1
-----	1	-----	-----	-----	-----	-----	-----	1	-----	1
-----	-----	-----	-----	-----	-----	-----	2	g 1	-----	3
b 76	101	b 101	3	i 393	j 154	k 198	l 371	m 52	n 167	o 250
b 76	101	b 101	3	i 393	j 154	k 198	l 373	p 53	n 167	o 253

k Not including 2 who report transmitter disinfected regularly and receiver disinfected at pleasure, and 6 not reported.

l Including 1 who lives with aunt and pays no board and 3 who do light housekeeping, but not including 1 not reported.

m Including 10 who board at home, but not including 1 not reported.

n Including 1 who walks part of way only and 1 who walks 3 trips and rides one, but not including 7 not reported.

o Including 24 who ride one way only, but not including 7 not reported

p Including 1 who boards with married sister and 10 who board at home, but not including 1 not reported.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

BELL TELEPHONE COMPANY OF MISSOURI, ST. LOUIS, MO.—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Messengers.....	10	4	2	6	.....	.....	3	2	.....	.....	1	.....	.....	.....
Do.....	8	13	.....	13	.....	.....	1	.....	4	.....	6	.....	2	.....
Total.....		17	2	19	.....	.....	4	2	4	.....	7	.....	2	.....
Operators.....	10	2	464	466	.....	.....	1	.....	80	1	161	.....	101	.....
Operators, chief.....	10	.....	39	39	.....	.....	.....	.....	.....	.....	1	.....	5	.....
Operators, student.....	10	.....	35	35	.....	.....	.....	.....	34	.....	1	.....	.....	.....
Painters.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paymasters.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paymasters, assistant.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Repairers.....	10	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	16	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		21	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Solicitors.....	8	42	.....	42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	10	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	11	7	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		11	8	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stock keepers.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Superintendents.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	6	1	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		7	1	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	10	.....	49	49	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Surveyors.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switchboard men.....	10	21	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers.....	10	16	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		17	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trouble men.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Watchmen.....	12	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	10	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs, assistant.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wiremen.....	8	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	12	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....		634	663	1,297	.....	1	4	5	4	116	9	180	14	128

Number of employees whose monthly rates were—																		
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
1	77		44				5		2		6		1		1		1	
2	2		9		6													
							2											
							1											1
							1		2	2		12						
								2	2	2								
							1		4	4		12						
							4		24	8		3		1		2		
1	2	1	1	2	1	4	2	1	2	1			1					
1	2	1	1	2	1	4	2	1	2	1			1					
							1											
																1		6
													1			1		6
	3		12		18		13		1									
					1										1			
					2										1			
					4		1		5	8		3						
							3		5	6		2						
							1											
							4		5	6		2						
													1					
							5											
							1											
							6											
										1		2		6		1		
										1		6				1		
					1													
					1		1											
							1											
					2		1											
20	94	15	72	60	27	144	24	106	6	113	6	64	2	49	1	20	1	12

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

BELL TELEPHONE COMPANY OF PENNSYLVANIA, PHILADELPHIA, PA.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Accountants.....	7½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	9	.....	66	66	.....	.....	.....	.....	.....	.....	3	.....	15	.....
Do.....	8½	.....	12	12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Do.....	8	.....	11	12	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	7½	.....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	95	96	.....	.....	.....	.....	.....	.....	1	3	.....	16
Clerks, chief.....	7½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	7½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Instructors.....	8	.....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	9½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	9	.....	13	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
Do.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	15	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	11
Messengers.....	9	.....	6	6	.....	4	.....	2	.....	.....	.....	.....	.....	.....
Do.....	8	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	7	7	.....	5	.....	2	.....	.....	.....	.....	.....	.....
Operators.....	10	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	9	.....	744	744	.....	.....	.....	.....	59	.....	261	.....	270	.....
Do.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Do.....	6	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Total.....		.....	750	750	.....	.....	.....	.....	59	.....	263	.....	272	.....
Operators, chief.....	9	.....	9	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	8	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	19	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators, senior.....	9	.....	53	53	.....	.....	.....	.....	.....	.....	3	.....	17	.....
Stenographers.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	8½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7½	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Total.....		.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Supervisors.....	9	.....	36	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Do.....	8	.....	79	79	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Do.....	7	.....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	121	121	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
Supervisors, chief.....	9	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	9	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	11	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers.....	7½	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....		.....	14	1,079	1,093	5	.....	2	.....	59	1	269	.....	326

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

BELL TELEPHONE COMPANY OF PENNSYLVANIA, PHILADELPHIA, PA.

Number of employees whose monthly rates were—

\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
									1										
	27		13		8														
	3		4		7														
	1		1		1				1		1								
	31		25		17				1		1		1						
									1						1				
					4				1		1								
	3																		
	1																		
	4																		
	149		5																
			2																
	149		7																
			1		1				3				4						
					2				1				1						
									4				1						
			1		3				4				5						
	21		11		1								6						
			1																
					1														
			1		1														
	20		9		2														
	10		34		29				2				1						
	1		4		1														
	31		47		32				2				1						
	1				1														
					9														
	1				10														
2	1	1	2		1				1										
2	238	1	94		69				8	2	9		7				1		

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CENTRAL DISTRICT AND PRINTING TELEGRAPH COMPANY, PITTSBURG, PA.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Accountants.....	8½	4	—	4	—	—	—	—	—	—	—	—	—	—
Adjusters.....	8½	3	—	3	—	—	—	—	—	—	—	—	—	—
Agents.....	8½	25	—	25	—	—	—	—	—	—	—	—	—	—
Blueprinters.....	8½	1	—	1	—	—	—	—	—	—	1	—	—	—
Bookkeepers.....	8½	29	3	32	—	—	—	—	—	—	1	—	—	—
Cable splicers.....	9	34	—	34	—	—	—	—	—	—	—	—	—	—
Carpenters.....	9	2	—	2	—	—	—	—	—	—	—	—	—	—
Cashiers.....	8½	3	1	4	—	—	—	—	—	—	—	1	—	—
Clerks.....	9	49	2	51	—	—	—	—	—	—	—	—	—	—
Do.....	8½	117	70	187	—	—	—	—	—	—	4	13	3	24
Do.....	8	—	3	3	a 1	—	—	—	—	—	—	—	—	—
Do.....	7½	—	3	3	—	—	1	—	—	—	—	2	—	—
Do.....	4	—	1	1	—	—	—	—	—	—	—	—	—	—
Total.....		166	79	245	b 2	—	1	—	—	—	4	15	3	24
Clerks, chief.....	8½	11	—	11	—	—	—	—	—	—	—	—	—	—
Clerks, chief, assistant.....	8½	1	—	1	—	—	—	—	—	—	—	—	—	—
Collectors.....	8½	17	—	17	—	—	—	—	—	—	—	—	—	—
Draftsmen.....	8½	3	—	3	—	—	—	—	—	—	—	—	—	—
Draftsmen, chief.....	8½	1	—	1	—	—	—	—	—	—	—	—	—	—
Electricians.....	9	1	—	1	—	—	—	—	—	—	—	—	—	—
Elevator conductors.....	9	4	—	4	—	—	—	—	—	—	—	—	—	—
Engineers.....	12	2	—	2	—	—	—	—	—	—	—	—	—	—
Do.....	9	4	—	4	—	—	—	—	—	—	—	—	—	—
Do.....	8½	16	—	16	—	—	—	—	—	—	—	—	—	—
Total.....		22	—	22	—	—	—	—	—	—	—	—	—	—
Engineers, assistant.....	9	2	—	2	—	—	—	—	—	—	—	—	—	—
Field men.....	8½	3	—	3	—	—	—	—	—	—	—	—	—	—
Field men, chief.....	8½	1	—	1	—	—	—	—	—	—	—	—	—	—
Foremen.....	9	32	—	32	—	—	—	—	—	—	—	—	—	—
Do.....	8½	3	—	3	—	—	—	—	—	—	—	—	—	—
Total.....		35	—	35	—	—	—	—	—	—	—	—	—	—
Foremen, general.....	8½	3	—	3	—	—	—	—	—	—	—	—	—	—
Inspectors.....	9	35	—	35	—	—	—	—	—	—	—	—	—	—
Do.....	8½	15	—	15	—	—	—	—	—	—	—	—	—	—
Total.....		50	—	50	—	—	—	—	—	—	—	—	—	—
Inspectors, chief.....	8½	3	—	3	—	—	—	—	—	—	—	—	—	—
Installers.....	9	31	—	31	—	—	—	—	—	—	—	—	—	—
Instructors.....	8½	1	4	5	—	—	—	—	—	—	—	—	—	—
Janitors.....	10	9	—	9	—	—	—	—	—	—	—	—	—	—
Do.....	9	9	—	9	—	—	—	—	—	—	—	—	—	—
Do.....	8	—	1	1	—	—	—	—	—	—	—	1	—	—
Do.....	6½	—	10	10	—	—	—	—	—	—	—	9	—	—
Do.....	4	—	1	1	a 1	—	—	—	—	—	—	—	—	—
Do.....	3	—	2	2	—	—	2	—	—	—	—	—	—	—
Do.....	2½	—	1	1	—	—	1	—	—	—	—	—	—	—
Do.....	2	—	5	5	a 5	—	—	—	—	—	—	—	—	—
Total.....		18	20	38	c 9	—	—	—	—	—	—	10	—	—
Laborers.....	9	4	—	4	—	—	—	—	—	—	—	—	—	—
Linemen.....	9	128	—	128	—	—	—	—	—	—	—	—	—	—
Managers.....	8½	4	—	4	—	—	—	—	—	—	—	—	—	—

a Under \$10.

b Including 1 under \$10.

c Including 6 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd

BELL TELEPHONE SYSTEM—Continued.

CENTRAL DISTRICT AND PRINTING TELEGRAPH COMPANY, PITTSBURG, PA.—
Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Matrons.....	9	.....	6	6	.....	1	.....	.....	.....	.....	.....	5	.....	.....
Messengers.....	8½	15	4	19	.....	.....	1	4	13	.....	1	.....	.....	.....
Monitors.....	8½	.....	19	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
Operators.....	14	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	13	.....	2	2	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Do.....	12	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	1	19	20	.....	.....	1	7	.....	.....	.....	7	.....	1
Do.....	9	.....	64	64	.....	.....	.....	1	.....	4	.....	36	.....	9
Do.....	8½	.....	443	443	.....	.....	.....	1	.....	40	.....	269	.....	102
Do.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	6½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	6	.....	29	29	.....	.....	.....	13	.....	10	.....	1	.....	2
Do.....	5	.....	16	16	.....	2	.....	12	.....	.....	.....	1	.....	1
Do.....	(b)	.....	c 1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	1	d 578	d 579	.....	e 3	1	34	.....	72	.....	316	.....	117
Operators, chief.....	11	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	9	.....	22	22	.....	.....	.....	.....	.....	.....	.....	5	.....	9
Do.....	8½	.....	24	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Do.....	6	.....	5	5	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Total.....	.....	.....	52	52	.....	.....	.....	.....	.....	1	.....	5	.....	13
Operators, senior.....	8½	.....	27	27	.....	.....	.....	.....	.....	.....	.....	1	.....	4
Operators, student.....	8½	.....	27	27	.....	26	.....	1	.....	.....	.....	.....	.....	.....
Painters.....	9	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Repair men.....	9	.....	45	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	.....	18	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	18	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Students.....	8½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Superintendents.....	8½	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Do.....	8½	.....	34	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Do.....	6	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	38	38	.....	.....	.....	.....	.....	.....	.....	1	.....	2
Supervisors, building.....	9	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers.....	9	.....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Traffic chiefs.....	8½	.....	8	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Traffic chiefs, assistant.....	8½	.....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Watchmen.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	9	.....	22	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	24	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire men.....	8½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	9	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....	.....	.....	752	d 873	d 1,625	.....	f 41	2	40	13	73	7	354	3 165

a Under \$10.

b Not reported.

c Rate not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CENTRAL DISTRICT AND PRINTING TELEGRAPH COMPANY, PITTSBURG, PA.—
Concluded.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
	4		7		1		2												
							1												
	28		2		1														
	3																		
	31		2		1		1												
	5		2		1														
	4		3		2		7		5										
	1		3																
	10		8		3		7		5										
	22																		
					1				1		1		6						
	1						1				38								
		1	2				3		6		4		5		7		1		3
	1	1	2				3		6		4		5		7		1		3
							1											3	
	9		19		2		2												
	2		1																
	11		20		2		2												
							1		2		2		1				3		
							2				1				3		2		1
									1										
											9		8				4		1
													1				1		
											9		9				5		1
															1				
							2		4				1						
5	96	7	59	32	11	120	19	153	12	211	2	58		52		50		39	

d Including 1, rate not reported.

e Including 1 under \$10.

f Including 8 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CENTRAL UNION TELEPHONE COMPANY, INDIANAPOLIS, IND.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Cable splicers.....	9	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	9	3	1	4	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.....	8	10	17	27	.....	.....	.....	.....	3	.....	2	.....	4	.....
Do.....	7	.....	4	4	.....	.....	.....	.....	2	.....	1	.....	1	.....
Total.....	.....	13	22	35	.....	.....	.....	.....	6	.....	3	.....	5	.....
Collectors.....	8	11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen.....	9	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	9	19	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Linemen.....	9	23	.....	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	8	.....	5	5	.....	.....	.....	.....	5	.....	.....	.....	.....	.....
Messengers.....	8	.....	3	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....
Operators.....	9	.....	2	2	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Do.....	8	.....	166	166	.....	.....	3	.....	59	.....	67	.....	29	.....
Do.....	6½	.....	1	1	.....	.....	.....	.....	8	.....	1	.....	.....	.....
Do.....	6	.....	11	11	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Total.....	.....	.....	180	180	.....	.....	3	.....	67	.....	71	.....	30	.....
Operators, chief.....	8	.....	9	9	.....	.....	.....	.....	.....	.....	4	.....	1	.....
Operators, chief assistant.....	8	.....	9	9	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	6	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	10	10	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Operators, student.....	8	.....	23	23	.....	.....	19	.....	4	.....	.....	.....	.....	.....
Repairmen.....	9	11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8	.....	9	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stock keepers.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	8	.....	13	13	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Switchboard men.....	9	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	9	19	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....	.....	114	275	389	.....	3	.....	22	.....	82	.....	79	.....	38

CHESAPEAKE AND POTOMAC TELEPHONE COMPANY, BALTIMORE, MD.

Clerks.....	8	1	10	11	.....	.....	.....	.....	.....	.....	1	.....	8	.....
Do.....	(a)	3	5	8	.....	.....	.....	.....	.....	.....	.....	3	8	.....
Total.....	.....	4	15	19	.....	.....	.....	.....	.....	.....	1	4	10	.....
Clerks, chief.....	8	.....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers.....	8	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers, assistant.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	8	.....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	5	.....
Do.....	7	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Total.....	.....	.....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	6	.....
Messengers.....	8	7	.....	7	.....	4	.....	.....	.....	3	.....	.....	.....	.....
Monitors.....	8	.....	13	13	.....	.....	.....	.....	1	.....	.....	.....	12	.....
Do.....	7	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
Do.....	6½	.....	2	2	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Do.....	6	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Total.....	.....	.....	19	19	.....	.....	.....	.....	1	.....	1	.....	17	.....

(a) Not reported.

CENTRAL UNION TELEPHONE COMPANY, INDIANAPOLIS, IND.

CHESAPEAKE AND POTOMAC TELEPHONE COMPANY, BALTIMORE, MD.

[illegible]

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CHESAPEAKE AND POTOMAC TELEPHONE COMPANY, BALTIMORE, MD.—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Operators.....	8	1	206	207	....	4	....	14	....	11	....	29	1	143
Do.....	7½	....	13	13	....	....	....	1	....	5	....	6	....	1
Do.....	7	....	37	37	....	....	....	1	....	....	....	10	....	26
Do.....	6½	2	41	43	....	2	....	8	....	8	1	12	1	11
Do.....	6	....	2	2	....	....	....	....	....	1	....	1	....	....
Do.....	5	....	10	10	....	....	....	....	....	1	....	....	....	9
Do.....	(a)	1	33	34	....	2	....	3	....	7	1	7	....	12
Total.....	....	4	342	346	....	8	....	27	....	33	2	65	2	202
Operators, chief.....	8	....	12	12	....	....	....	....	....	....	....	....	....	1
Do.....	7½	....	1	1	....	....	....	....	....	....	....	....	....	....
Do.....	6½	....	5	5	....	....	....	....	....	....	....	....	....	3
Total.....	....	....	18	18	....	....	....	....	....	....	....	....	....	4
Operators, senior.....	8	....	13	13	....	....	....	....	....	....	....	1	....	11
Do.....	6½	....	2	2	....	....	....	....	....	....	....	....	....	2
Do.....	6	....	1	1	....	....	....	....	....	....	....	....	....	1
Total.....	....	....	16	16	....	....	....	....	....	....	....	1	....	14
Stenographers.....	8	....	1	1	....	....	....	....	....	....	....	....	....	1
Supervisors.....	8	....	19	19	....	....	....	....	....	....	....	....	....	3
Do.....	7	....	1	1	....	....	....	....	....	....	....	....	....	....
Do.....	6½	....	1	1	....	....	....	....	....	....	....	....	....	....
Total.....	....	....	21	21	....	....	....	....	....	....	....	....	....	3
Grand total.....	....	21	443	464	....	8	4	27	....	34	5	68	6	257

CHESAPEAKE AND POTOMAC TELEPHONE COMPANY, WASHINGTON, D. C.

Clerks.....	8	11	11					2		1		5		
Clerks, chief.....	8	2	2											
Managers.....	8	3	3											
Managers, assistant.....	8	2	2											
Matrons.....	8	3	3							2		1		
Messengers.....	8	7	8		6	1	1			1		3		
Monitors.....	8	8	8											
Operators.....	8	1	283	284			54		45		35	1	142	
Do.....	7		1	1							1			
Total.....		1	284	285			54		45		36	1	142	
Operators, chief.....	8		9	9									2	
Do.....	7½		1	1										
Do.....	7		1	1									1	
Total.....			11	11									3	
Operators, chief, assistant.....	8		1	1										
Operators, senior.....	8		3	3									3	
Supervisors.....	8		19	19							1		3	
Supervisors, chief.....	8		1	1										
Waitresses.....	8		2	2		1							1	
Grand total.....		13	346	359		1	6	55	1	47		41	1	161

a Not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CHESAPEAKE AND POTOMAC TELEPHONE COMPANY, BALTIMORE, MD.—Concluded.

Number of employees whose monthly rates were—

\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
...	3	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
...
...
...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	4	...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	4	...	...	...	3	...	...	...	2	...	...	...	1	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	3	...	4	...	1	...	3	...	...	...	2	...	...	...	1	...	...	...	...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...
...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...
...	4	...	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...
...	5	...	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...
...	15	...	20	...	6	...	5	...	...	1	2	1	...	1	1	1	...	2	...

CHESAPEAKE AND POTOMAC TELEPHONE COMPANY, WASHINGTON, D. C.

...	1	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	1	...	...	...	1	...	...	...	1	...	1	...	...	...	...	1	...
...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
...
...	1	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	6	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...
...	6	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	2	...	1	...	...	...	...	...	2	1	...	1	...	...	1	...	...	...	...
...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
...	2	...	1	...	...	...	...	...	3	...	1	...	...	...	1	...	...	...	...
...
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	2	...	11	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	12	...	18	...	4	...	2	...	3	2	1	1	...	1	1	...	...	1	...

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CHICAGO TELEPHONE COMPANY, CHICAGO, ILL.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Adjusters.....	8	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Agents.....	8	19	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Battery men.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Blacksmiths.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Blue printers.....	8	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Bookkeepers.....	8	81	.....	81	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bricklayers.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cable splicers.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	97	.....	97	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		98	.....	98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carpenters.....	8	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8	2	3	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chauffeurs, drivers, hostlers, and stablemen.....	12	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	19	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		32	.....	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	10	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8 ^a	4	11	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	524	169	693	.....	.....	6	.....	5	1	6	3	13	18
Do.....	5	1	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Do.....	(d)	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		534	181	745	.....	.....	6	1	5	1	6	3	13	18
Clerks, chief.....	8	17	3	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks, chief, assistant.....	8	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors.....	8	100	3	103	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Compositors.....	8	.....	9	9	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Delivery men.....	10	55	.....	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		64	.....	64	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Draftsmen.....	8	21	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Draftsmen, chief.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elevator conductors.....	12	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Engineers.....	10	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

^a Not including 30, sex not reported.^b Including 1, rate not reported.^c Including 10, rate not reported.^d Not reported.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

CHICAGO TELEPHONE COMPANY, CHICAGO, ILL.

e Not including 30, sex not reported, and including 1, rate not reported.
f Not including 30, sex not reported, and including 10, rate not reported.
g Including 63, rate not reported.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CHICAGO TELEPHONE COMPANY, CHICAGO, ILL.—Continued.

	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Engineers, assistant.....	9	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Examiners.....	8	8	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen.....	10	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	106	.....	106	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	112	.....	112	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, assistant.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, general.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Frame men.....	8	27	.....	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	108	1	109	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	(a)	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	110	1	111	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors, chief.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	8½	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	398	.....	398	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Total.....	.....	402	.....	402	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Installers, chief.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Instructors.....	8	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Investigators, claims department.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	15	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	48	1	49	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	8½	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	45	5	50	b 3	.....	1	1	5	1	2	1	3	2
Do.....	6	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	5	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	2	1	2	3	1	2	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	(a)	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	111	14	125	b 4	2	1	1	5	2	2	5	3	4
Laborers.....	10	113	.....	113	.....	.....	.....	.....	.....	.....	3	.....	3	.....
Do.....	9	65	.....	65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	2	.....	2	.....	.....	.....	.....	.....	.....	4	.....	9	.....
Do.....	8	209	.....	209	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	(a)	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	391	.....	391	.....	.....	.....	.....	.....	.....	7	.....	12	.....
Linemen.....	8	308	.....	308	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Machinists.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers.....	8½	15	1	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	39	2	41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	5	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	66	3	69	.....	.....	.....	.....	.....	.....	.....	.....	.....	1

a Not reported.

b Including 2 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd

BELL TELEPHONE SYSTEM—Continued.

CHICAGO TELEPHONE COMPANY, CHICAGO, ILL.—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Managers, assistant.....	8½	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	6	1	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	15	1	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	8½	.....	23	23	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	8	.....	9	9	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.....	5	.....	16	16	.....	.....	.....	.....	.....	.....	16	.....	.....	.....
Total.....	.....	.....	48	48	.....	.....	.....	.....	1	.....	17	.....	.....	.....
Messengers.....	10	3	.....	3	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Do.....	8½	12	.....	12	.....	.....	2	.....	5	.....	5	.....	.....	.....
Do.....	8	.....	.....	67	.....	11	.....	16	.....	31	.....	8	.....	.....
Total.....	.....	82	.....	82	.....	13	.....	21	.....	37	.....	9	.....	.....
Operators.....	8½	5	1,662	1,667	.....	.....	.....	.....	25	.....	51	.....	2	497
Do.....	8	9	517	526	1	1	3	12	4	163	136	.....	103	.....
Do.....	6½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6	.....	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Do.....	5	.....	1,185	1,185	.....	3	.....	113	.....	534	271	.....	219	1
Do.....	(a)	.....	4	4	.....	.....	.....	.....	3	.....	.....	.....	.....	.....
Total.....	.....	14	3,371	3,385	1	4	3	125	4	727	1	458	2	820
Operators, chief.....	8½	.....	41	41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	38	38	.....	.....	.....	.....	.....	.....	3	.....	6	.....
Do.....	5	.....	25	25	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Total.....	.....	.....	104	104	.....	.....	.....	.....	.....	.....	4	.....	6	.....
Operators, chief, assistant...	8½	.....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	12	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators, student.....	7	.....	175	175	.....	.....	.....	175	.....	.....	.....	.....	.....	.....
Painters.....	8½	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Photographers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Repairmen.....	8	261	.....	261	.....	.....	.....	.....	.....	.....	.....	6	.....	.....
Solicitors.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8½	(b)	b 1	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	11	63	74	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Total.....	.....	b 11	b 64	82	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Stock keepers.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Superintendents.....	8	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	8½	.....	310	310	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	40	40	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Do.....	5	.....	193	193	.....	.....	.....	.....	.....	.....	2	.....	4	.....
Total.....	.....	.....	543	543	.....	.....	.....	.....	.....	.....	3	.....	5	.....

a Not reported.

b Not including 7, sex not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CHICAGO TELEPHONE COMPANY, CHICAGO, ILL.—Continued.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
										2		3		1		2		1	
	1					2		1		2						1			
	1					2		1		4		3		1		3		1	
	6		10		5		1						2						
	6																		
	12		10		5		1						2						
1																			
		1																	
1		1																	
1	599		459	1	25		6												
	96		4		2	1													
			1																
	36		8				1												
1	731		472	1	27	1	7												
					5		15	7		8		5					1		
	7		8		7		7												
	3		2				10		8		1								
	10		10		12		32		15		9		5				1		
									3		2								
	3		2		2														
	3		2		2				3		2								

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CHICAGO TELEPHONE COMPANY, CHICAGO, ILL.—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Supervisors, building.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switchboard men.....	8	192	.....	192	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	49	.....	49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		50	.....	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers, chief.....	8	17	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Traffic chiefs.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trouble men.....	8	12	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Watchmen.....	15	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	12	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	8	38	.....	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	10	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	127	1	128	.....	.....	.....	.....	2	.....	3	1	13	.....
Do.....	5	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.....	(a)	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		135	2	137	.....	.....	.....	.....	2	1	3	1	13	.....
Grand total.....		3,432	4,541	8,100	46	6	23	302	38	732	57	492	60	857

CINCINNATI AND SUBURBAN BELL TELEPHONE COMPANY, CINCINNATI, OHIO.

Agents.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Assemblers.....	9	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Battery men.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cabinetmakers.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cable splicers.....	9	17	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carpenters.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	9	5	7	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	42	26	68	.....	.....	.....	.....	1	1	4	1	1	5
Do.....	6½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		47	34	81	.....	.....	.....	.....	1	1	4	2	1	10
Clerks, chief.....	8	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors.....	8	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Draftsmen.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Draftsmen, chief.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Drivers and hostlers.....	(c)	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elevator conductors.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Engineers.....	8	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen.....	9	35	.....	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, assistant.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, general.....	9	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

^a Not reported.^b Not including 37, sex not reported, and including 1, rate not reported.^c Not including 37, sex not reported, and including 10, rate not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CHICAGO TELEPHONE COMPANY, CHICAGO, ILL.—Concluded.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
				1		47		58		53		15		11		7		1	
						1		11		1	15	16		5		1			
						1		11		16		16		5		1			
														3		14			
				1		9		2								1			
								2											
								3											
								3											
								1											
								9											
								5		6		10		1		7		9	
				1		2		2											
1		2		1		33		23		28		10		5		3		3	
						1				1									
1		2		2		37		25		29		10		5		3		3	
40	825	48	594	246	185	834	442	578	50	634	29	406	7	182	3	163	6	53	1

CINCINNATI AND SUBURBAN BELL TELEPHONE COMPANY, CINCINNATI, OHIO.

				3		6				1									
						2													
						1													
						1		1		2				13					
						2										1			
1																			
3	2	4	4	10	2	5	12		9	1	3		2			1			
4	6	4	10	3	5	14			9	4		2				1			
2		1			3		1			1				1		1		1	
							2												
						10				1									
						4			1										
						1													
1									3			1							
									15			9		2					
										7									
										1									
										1				2					

d Including 2 under \$10.
e Not reported.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CINCINNATI AND SUBURBAN BELL TELEPHONE COMPANY, CINCINNATI, OHIO—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Inspectors.....	9	79	.....	79	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	8	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		83	.....	83	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Installers.....	9	27	.....	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Instructors.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	9	6	7	13	a 1	a 4	.....	.....	.....	.....	.....	3	.....	.....
Do.....	8	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		8	8	16	a 1	a 4	.....	.....	.....	.....	.....	3	.....	.....
Laborers.....	9	31	.....	31	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Linemen.....	9	100	.....	100	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Machinists.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers.....	9	7	1	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers, assistant.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	9	.....	3	3	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Do.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Do.....	6½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	5	5	.....	.....	.....	.....	.....	.....	3	.....	1	.....
Messengers.....	9	1	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Do.....	8	8	.....	8	.....	.....	3	.....	3	.....	.....	1	.....	.....
Do.....	6½	.....	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Total.....		9	2	11	.....	.....	3	.....	3	2	2	.....	1	.....
Monitors.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators.....	9	15	328	343	.....	.....	1	.....	.....	22	2	4	1	275
Do.....	6½	.....	262	262	.....	.....	.....	34	.....	9	.....	219	.....	.....
Do.....	6	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Total.....		15	591	606	.....	.....	1	35	.....	31	2	223	1	275
Operators, chief.....	9	3	19	22	.....	.....	.....	.....	.....	.....	3	.....	3	.....
Operators, chief, assistant.....	9	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Painters.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paymasters, assistant.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Porters.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Solicitors.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		17	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8	2	15	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stock keepers.....	(b)	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Superintendents.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Under \$10.

b Not reported.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CINCINNATI AND SUBURBAN BELL TELEPHONE COMPANY, CINCINNATI, OHIO—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Supervisors.....	9	.....	25	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switchboard men.....	9	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switchboard men helpers.....	9	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers.....	9	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers, chief.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Watchmen.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	9	12	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wiremen.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	9	14	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....	.....	531	707	1,238	a1	a4	4	35	4	34	11	234	8	290

CITIZENS TELEPHONE COMPANY, COVINGTON, KY.

Battery men.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	(b)	1	2	3	a1	a2	.....	.....	.....	.....	.....	.....	.....	.....
Managers.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Operators.....	9	.....	30	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	30
Do.....	6½	.....	27	27	.....	.....	.....	.....	1	.....	26	.....	.....	.....
Do.....	(b)	.....	9	9	.....	1	.....	3	.....	4	.....	1	.....	.....
Total.....	.....	.....	66	66	.....	1	.....	3	.....	5	.....	27	.....	30
Operators, chief.....	9	1	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Solicitors.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switchboard men.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....	.....	6	77	83	a1	c3	.....	3	.....	5	.....	28	.....	31

CLEVELAND TELEPHONE COMPANY, CLEVELAND, OHIO.

Agents.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bookkeepers.....	8	11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bricklayers.....	10	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cable splicers.....	9	25	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carpenters.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	9	12	6	18	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	8	21	29	50	.....	.....	.....	.....	.....	.....	2	1	3	.....
Total.....	.....	33	35	68	.....	.....	.....	.....	.....	.....	3	1	3	.....
Clerks, chief.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors.....	8	13	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors, chief.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Drivers.....	9	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Engineers.....	9	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Under \$10.

b Not reported.

c Including 2 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CLEVELAND TELEPHONE COMPANY, CLEVELAND, OHIO—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Elevator conductor.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen.....	9	11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		12	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, general.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Framemen.....	9	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	9	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	7	1	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		14	1	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	9	32	.....	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Instructors.....	8	.....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	9	7	12	19	.....	.....	.....	.....	.....	.....	12	.....	.....	.....
Laborers.....	9	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	40	.....	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		44	.....	44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Linemen.....	9	27	.....	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers.....	9	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	9	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Messengers.....	9	.....	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.....	8	4	.....	4	.....	.....	.....	.....	1	.....	3	.....	.....	.....
Total.....		4	1	5	.....	.....	.....	.....	1	1	3	.....	.....	.....
Operators.....	9	3	319	322	1	1	1	9	.....	117	.....	116	.....	56
Operators, chief.....	9	2	4	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators, chief, assistant..	9	1	27	28	.....	.....	.....	.....	.....	1	.....	13	.....	3
Operators, student.....	9	.....	23	23	.....	.....	.....	23	.....	.....	.....	.....	.....	.....
Painters.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Servers.....	9	.....	4	4	.....	.....	.....	.....	.....	.....	.....	3	.....	1
Stenographers.....	8	.....	8	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stock keepers.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Superintendents.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	36	36	.....	.....	.....	.....	.....	3	.....	8	.....	5
Testers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tile layers.....	10	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trouble men.....	9	31	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Watchmen.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	9	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs, assistant.....	9	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	9	1	1	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Grand total.....		320	479	799	1	1	1	32	1	123	3	155	2	68

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CLEVELAND TELEPHONE COMPANY, CLEVELAND, OHIO—Concluded.

Number of employees whose monthly rates were—

\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
						1													
										1		10							
										1		10		1					
																2			
		6				1													
		1	1			1				7		2		1		1			
		1	1			1				8		2		1		1			
1			4			8		18		5	1								
		3				4													
2					1	1				3									
				26		8		3		3									
2				27		9		3		3									
						5		2		20									
								1		1				1		3			
																1			
								1		1				1		4			
	1		1				1												
	16	1	4																
	5		1		1	2	1			1		1							
			2																
						1													
	2		1		1	1	2				2								
						1													
	9		11													1		2	
						1		1											
								14		16									
								3		4				1					
										2									
3	48	12	35	31	5	66	9	73		78	3	25		10		8		6	

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

COLORADO TELEPHONE COMPANY, DENVER, COLO.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Adjusters.....	8	1		1										
Agents.....	8	9		9										
Blueprinters.....	8	1		1										
Bookkeepers.....	8	17		17										
Cable splicers.....	8	16		16										
Cashiers.....	8	2		2										
Clerks.....	8	25	56	81							6	2	2	
Clerks, chief.....	8	3		3										
Collectors.....	8	19		19							2			
Draftsmen.....	8	1		1										
Draftsmen, chief.....	8	1		1										
Elevator conductors.....	10	4		4										
Engineers.....	8	5		5										
Engineers, assistant.....	8	1		1										
Foremen.....	8	9		9										
Foremen, assistant.....	8	4		4										
Framemen.....	8	2		2										
Inspectors.....	8	4		4										
Installers.....	8	28		28										
Instructors.....	8		4	4										
Janitors.....	8	10	1	11			1							
Laborers.....	8	4		4	1									
Linemen.....	8	43		43										
Managers.....	8	6	4	10										
Managers, assistant.....	8		2	2										
Matrons.....	8		5	5										
Messengers.....	8	13		13				7			4		2	
Operators.....	8		339	339						2		67		41
Operators, student.....	8		8	8						8				
Stationers.....	8	1		1										
Stenographers.....	8		11	11										
Stock keepers.....	8	3		3										
Superintendents.....	8	2		2										
Superintendents, assistant.....	8	2		2										
Supervisors.....	8		31	31										
Switchboard men.....	8	14		14										
Teamsters.....	10	2		2										
Testers.....	8	6	3	9										
Treasurers, assistant.....	8	1		1										
Trouble men.....	8	17		17										
Wire chiefs.....	8	4		4										
Wiremen.....	8	1		1										
Miscellaneous.....	8	1		1										
Total.....		282	464	746	1		1		7	10	6	73	4	43

CUMBERLAND TELEPHONE AND TELEGRAPH COMPANY, LOUISVILLE, KY.

Battery men.....	9	1		1										
Blacksmiths.....	9	1		1										
Bookkeepers.....	9	4	1	5										
Cable splicers.....	9	4		4										
Cashiers.....	9	2		2										
Carpenters.....	9	2		2										
Chauffeurs.....	9	2		2										
Clerks.....	10		2	2										1
Do.....	9	7	1	8									1	
Total.....		7	3	10									1	1
Clerks, chief.....	9		1	1										
Collectors.....	9	3		3										
Draftsmen.....	9	2		2										
Electricians.....	9	9		9										

a Under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd

BELL TELEPHONE SYSTEM—Continued.

CUMBERLAND TELEPHONE AND TELEGRAPH COMPANY, LOUISVILLE, KY.—Con.

Occupation.	Hours per regular full day.	Number of employees.		Number of employees whose monthly rates were—										
				Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.		
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Foremen.....	9	5		5										
Inspectors.....	9	2		2										
Installers.....	9	9		9										
Janitors.....	9	3		3							1		1	
Laborers.....	9	4		4										
Linemen.....	9	28		28										
Machinists.....	9	1		1										
Managers.....	9	1		1										
Matrons.....	12		1	1			1							
Messengers.....	10	2		2			2							
Do.....	7½	3		3			3							
Total.....		5		5			5							
Operators.....	10		53	53						7		33		13
Do.....	9		8	8								5		1
Do.....	8½		9	9						3		6		
Do.....	8		5	5						2		3		
Do.....	6½		6	6						3		3		
Do.....	5½		2	2						1				1
Do.....	5		6	6						3				
Do.....	4½		29	29		14		15						
Do.....	4		1	1						1				
Total.....			119	119		14		18		20		50		15
Operators, chief.....	10		4	4										
Do.....	5		2	2										1
Total.....			6	6										1
Operators, chief, assistant.....	10		2	2										1
Do.....	9½		1	1										
Do.....	9		1	1										
Do.....	5½		1	1										
Do.....	5		1	1										
Total.....			6	6										1
Operators, student.....	9		3	3		a 3								
Repair men.....	9		1	1										
Solicitors.....	9		7	7										
Stablemen and teamsters.....	12		1	1										
Stenographers.....	9		1	1										
Stock keepers.....	9		1	1										
Superintendents.....	9		1	1										
Supervisors.....	10		2	2										2
Do.....	9½		1	1										
Do.....	6½		1	1								1		
Do.....	5		1	1						1				
Total.....			5	5						1		1		2
Trouble men.....	9		9	9										
Do.....	8		1	1										
Total.....			10	10										
Watchmen.....	9		1	1										
Wire chiefs.....	9		5	5										
Wire chiefs, assistant.....	9		2	2										
Miscellaneous.....	9		2	2										
Grand total.....		126	146	272		b 17	5	19		21	1	51	2	20

a Under \$10.

b Including 3 under \$10.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CUMBERLAND TELEPHONE AND TELEGRAPH COMPANY, LOUISVILLE, KY.—Con.

[illegible]

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CUMBERLAND TELEPHONE AND TELEGRAPH COMPANY, NASHVILLE, TENN.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Batterymen.....	10	1	—	1	—	—	—	—	—	—	—	—	—	—
Bookkeepers.....	8	5	—	5	—	—	—	—	—	—	—	—	—	—
Cable splicers.....	10	5	—	5	—	—	—	—	—	—	—	—	—	—
Cashiers.....	8	1	—	1	—	—	—	—	—	—	—	—	—	—
Clerks.....	10	—	2	2	—	—	—	—	—	—	—	—	—	1
Do.....	9	—	1	1	—	—	—	—	—	—	—	—	—	1
Do.....	8	9	—	9	—	—	—	—	—	—	—	—	—	—
Total.....		9	3	12	—	—	—	—	—	—	—	—	—	2
Electricians.....	10	1	—	1	—	—	—	—	—	—	—	—	—	—
Foremen.....	10	5	—	5	—	—	—	—	—	—	—	—	—	—
Inspectors.....	10	1	—	1	—	—	—	—	—	—	—	—	—	—
Installers.....	10	16	—	16	—	—	—	—	—	1	—	—	—	—
Janitors.....	10	1	—	1	—	—	—	—	—	—	—	—	—	—
Linemen.....	10	17	—	17	—	—	—	—	—	1	—	—	—	—
Managers.....	8	2	—	2	—	—	—	—	—	—	—	—	—	—
Messengers.....	10	3	—	3	2	—	1	—	—	—	—	—	—	—
Do.....	4	2	—	2	a 2	—	—	—	—	—	—	—	—	—
Total.....		5	—	5	b 4	—	1	—	—	—	—	—	—	—
Operators.....	10	—	13	13	—	—	—	—	—	—	—	12	—	—
Do.....	9½	—	2	2	—	—	—	—	—	—	—	2	—	—
Do.....	9	1	117	118	—	1	1	22	—	21	—	71	—	1
Do.....	8	—	17	17	—	—	—	2	—	1	—	13	—	—
Do.....	7	—	6	6	—	—	—	5	—	1	—	—	—	—
Do.....	6	—	2	2	—	—	—	—	—	—	—	2	—	—
Do.....	5½	—	5	5	—	—	—	1	—	2	—	2	—	—
Do.....	4½	—	1	1	—	—	—	—	—	1	—	—	—	—
Do.....	4	—	9	9	—	7	—	1	—	1	—	—	—	—
Do.....	3½	—	2	2	—	2	—	—	—	—	—	—	—	—
Total.....		1	174	175	—	10	1	31	—	27	—	102	—	1
Operators, chief.....	9	—	6	6	—	—	—	—	—	—	—	—	—	2
Do.....	5	—	2	2	—	—	—	—	—	—	—	—	—	—
Do.....	4½	—	1	1	—	—	—	—	—	—	1	—	—	—
Do.....	4	—	1	1	—	—	—	—	—	—	—	—	1	—
Do.....	(c)	—	1	1	—	—	—	—	—	—	—	—	—	—
Total.....		—	11	11	—	—	—	—	—	—	—	1	—	3
Operators, chief, assistant...	9	—	2	2	—	—	—	—	—	—	—	—	—	—
Operators, student.....	5	—	1	1	—	1	—	—	—	—	—	—	—	—
Porters.....	10	2	—	2	—	—	—	—	—	1	—	—	1	—
Stenographers.....	8	—	1	1	—	—	—	—	—	—	—	—	—	—
Superintendents.....	10	2	—	2	—	—	—	—	—	—	—	—	—	—
Supervisors.....	9	—	3	3	—	—	—	—	—	—	3	—	—	—
Switchboard men.....	10	4	—	4	—	—	—	—	—	—	—	—	—	—
Teamsters.....	10	3	—	3	—	—	—	—	—	—	—	—	—	—
Testers.....	(c)	—	1	1	—	—	—	—	—	—	—	—	—	—
Trouble men.....	10	10	—	10	—	—	—	—	—	—	—	—	—	—
Wire chiefs.....	10	3	—	3	—	—	—	—	—	—	—	—	—	—
Miscellaneous.....	10	3	—	3	—	—	—	—	—	—	—	—	—	—
Grand total.....		98	195	293	2	11	2	31	—	27	3	106	1	6

a Under \$10.

b Including 2 under \$10.

c Not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CUMBERLAND TELEPHONE AND TELEGRAPH COMPANY, NASHVILLE, TENN.

Number of employees whose monthly rates were—

\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
						1		3		2									
				1		1				3		1							
	1																		
1				4				2		2									
1	1			4				2		2									
												1							
										3		2							
		2		3		9				1									
2				1		11		2		1								1	
										1									
	1																		
	1																		
	1																		
	3																		
	1			1		1				1									
	1			1															
	1																		
	3			2		1				1									
				1				1											
								1											
												1				1			
				1		2		1											
2				1						1									
										1									
				1		7				2									
										3									
		2								1									
5	7	4	3	12	1	31	2	15		14	1	5				1		1	

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CUMBERLAND TELEPHONE AND TELEGRAPH COMPANY, NEW ORLEANS, LA.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Agents.....	10	2		2										
Do.....	8	2		2										
Total.....		4		4										
Bookkeepers.....	8	6		6										
Cable splicers.....	10	27		27										
Carpenters.....	10	1		1										
Cashiers.....	8	3		3										
Clerks.....	10	5		5										
Do.....	9		2	2										
Do.....	8	10	13	23			1		7					2
Do.....	(a)	2	1	3							1			3
Total.....		17	16	33			1		7		1			5
Clerks, chief.....	8	1		1										
Collectors.....	8	5		5									1	
Custodians.....	10	1		1										
Drivers.....	10	4		4										
Electricians.....	10	5		5										
Engineers.....	10	1		1										
Foremen.....	10	16		16										
Foremen, general.....	10	2		2										
Foremen, general assistant.....	10	1		1										
Inspectors.....	10	26		26										
Installers.....	10	20		20							1		2	
Janitors.....	9		1	1										
Do.....	8		2	2			1							
Total.....			3	3			3							
Laborers.....	10	3		3										
Linemen.....	10	55		55										
Managers.....	10	1		1										
Do.....	8	1		1										
Total.....		2		2										
Matrons.....	9		3	3		1			2					
Messengers.....	10	4		4	1		3							
Do.....	8	1		1					1					
Do.....	6	2		2			2							
Total.....		7		7	1		5		1					
Monitors.....	6½		1	1										1
Operators.....	9		152	152			6		36		102			8
Do.....	8		13	13			1		1					11
Do.....	7		9	9			9							
Do.....	6½		9	9							1			8
Do.....	5½		2	2							2			
Do.....	(a)		4	4					1		3			
Total.....			189	189			16		38		108			27
Operators, chief.....	9		11	11							1			2
Do.....	8		1	1										
Do.....	6½		1	1										
Total.....			13	13							1			2

a Not reported.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

CUMBERLAND TELEPHONE AND TELEGRAPH COMPANY, NEW ORLEANS, LA.—
Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Operators, chief assistant.....	9	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Total.....		.....	3	3	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Operators, student.....	8	.....	4	4	.....	2	.....	.....	.....	1	.....	1	.....	.....
Do.....	5	.....	29	29	.....	29	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	33	33	.....	31	.....	.....	.....	1	.....	1	.....	.....
Painters.....	10	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Porters.....	10	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	9	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
Switchboard men.....	10	.....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Telegraph operators.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	6½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Total.....		.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Trouble men.....	10	.....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	10	.....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wiremen.....	10	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	10	.....	8	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....		.....	235	274	509	1	32	5	20	1	48	1	112	3 44

MISSOURI AND KANSAS TELEPHONE COMPANY, TOWNS UNDER 5,000 POPULATION.

Agents.....	8	4	.....	4	.....	a 2	.....	1	.....	3	.....	8	.....	3
Bookkeepers.....	8	.....	17	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cable splicers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Clerks.....	8	.....	25	25	.....	.....	3	.....	9	.....	8	.....	4	.....
Collectors.....	8	2	10	12	b 1	c 3	.....	.....	1	1	5	.....	1	.....
Foremen.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	8	5	1	6	d 4	.....	1	.....	1	.....	.....	.....	.....	.....
Linemen.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	58	.....	58	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Total.....		59	.....	59	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Managers.....	8	39	2	41	2	.....	1	.....	1	.....	.....	.....	2	1
Managers, assistant.....	8	6	1	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Messengers.....	8	1	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Operators.....	8	13	332	345	a 6	e 47	3	131	2	111	.....	35	.....	7
Do.....	(f)	.....	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Total.....		13	333	346	a 6	e 47	3	131	2	112	.....	35	.....	7
Operators, chief.....	8	1	1	2	.....	.....	1	.....	.....	.....	1	.....	.....	.....
Operators, student.....	8	.....	1	1	.....	b 1	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Trouble men.....	8	30	.....	30	1	.....	.....	.....	.....	.....	.....	.....	4	.....
Wire chiefs.....	8	13	1	14	a 2	.....	.....	.....	1	.....	1	.....	.....	.....
Grand total.....		184	395	579	g 16	h 53	7	135	4	126	2	57	8	19

a Including 1 under \$10.

b Under \$10.

c Including 2 under \$10.

d Including 3 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1903, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd

BELL TELEPHONE SYSTEM—Continued.

MISSOURI AND KANSAS TELEPHONE COMPANY, TOWNS 5,000 TO 15,000 POPULATION.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Agents.....	8	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bookkeepers.....	8	2	12	14	.....	.....	.....	.....	1	.....	3	.....	6	.....
Cashiers.....	8	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	8	2	16	18	.....	2	.....	1	3	.....	9	.....	1	.....
Collectors.....	8	1	18	19	.....	.....	.....	3	8	.....	2	.....	2	.....
Foremen.....	8	10	1	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Janitors.....	8	11	2	13	a 4	b 2	2	.....	2	.....	1	.....	.....	.....
Linemen.....	8	52	.....	52	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Managers.....	8	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers, assistant.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators.....	8	2	210	212	c 1	d 13	.....	57	108	1	20	.....	11	.....
Operators, chief.....	8	.....	2	2	.....	.....	.....	.....	.....	1	.....	.....	1	.....
Stenographers.....	8	.....	4	4	.....	.....	.....	.....	.....	.....	2	.....	1	.....
Supervisors.....	8	.....	2	2	.....	.....	.....	.....	1	.....	1	.....	.....	.....
Testers.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trouble men.....	8	12	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	8	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs, assistant.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	145	268	413	e 5	f 17	2	61	2	121	3	38	2	22

MISSOURI AND KANSAS TELEPHONE COMPANY, TOWNS 15,000 TO 25,000 POPULATION.

Agents.....	8	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bookkeepers.....	8	.....	4	4	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Cable splicers.....	8	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	8	3	17	20	.....	1	.....	2	1	.....	8	.....	3	.....
Clerks, chief.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors.....	8	2	6	8	.....	.....	.....	.....	3	.....	2	.....	1	.....
Foremen.....	8	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, assistant.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	8	4	.....	4	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Janitors.....	8	2	1	3	.....	.....	.....	.....	.....	1	.....	.....	1	.....
Do.....	1	.....	1	1	c 1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	2	2	4	e 1	.....	.....	.....	.....	1	.....	.....	1	.....
Linemen.....	8	29	.....	29	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Managers.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators.....	8	.....	119	119	b 3	.....	19	.....	38	.....	47	.....	9	.....
Solicitors.....	8	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	8	.....	2	2	.....	.....	.....	.....	1	.....	.....	.....	1	.....
Trouble men.....	8	8	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	8	11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs, assistant.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....	.....	95	152	247	a 5	.....	21	.....	43	3	59	2	15	.....

a Including 2 under \$10.

b Including 1 under \$10.

c Under \$10.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

MISSOURI AND KANSAS TELEPHONE COMPANY, TOWNS 5,000 TO 15,000 POPULATION.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
						6		4		3		2							
1	2							1											
			1			1													
	1		1		1	1		1		2									
				1		1		6	1										
						1		1											
						1		1											
13		1						1											
		1			6		17	12		4		4				4		3	
								1											
	1																		
	2				1			2											
	1				1		6	8		3		1							
					1		1												
18	5	2	2	12	1	35		36	1	14		7				4		3	

MISSOURI AND KANSAS TELEPHONE COMPANY, TOWNS 15,000 TO 25,000 POPULATION.

					2	3		3			1								
1										3									
	1							3	1										
	1					1													
		1		1				1		3									
								1											
								1											
1				1				1			1								
		1																	
		1																	
1				7		7		12				2		1				3	
	3					4		3		2									
			1																
						5		3											
		1						7		1		2							
		1								1									
3	5	4	1	9	2	20		34	1	10		6		1				3	

^d Including 4 under \$10.^e Including 3 under \$10.^f Including 5 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

MISSOURI AND KANSAS TELEPHONE COMPANY, TOWNS 25,000 POPULATION AND OVER.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Accountants.....	8	2		2										
Agents.....	8	13	2	15							1			
Bookkeepers.....	8	6	2	8										1
Cable splicers.....	8	38		38										
Cashiers.....	8	2	2	4										
Clerks.....	8	89	73	162			2		2		1	17	2	17
Clerks, chief.....	8	7		7										
Collectors.....	8	30	5	35							1			1
Draftsmen.....	8	6		6										
Elevator conductors.....	8	1		1										
Engineers.....	8	7		7										
Engineers, assistant.....	8	1		1										
Foremen.....	8	28		28										
Foremen, assistant.....	8	9		9										
Inspectors.....	8	14		14										
Installers.....	8	44		44										
Instructors.....	8		1	1										
Janitors.....	8	10	1	11				1					1	
Laborers.....	8	70	1	71										
Linemen.....	8	218		218							2		1	
Managers.....	8	7		7										
Matrons.....	8		6	6										5
Messengers.....	8	13	2	15			4	2	3	1	4			1
Monitors.....	8		8	8								1		
Operators.....	8	6	549	555	5	1	107	3	109	1	139			112
Operators, chief.....	8	1	5	6										
Repair men.....	8	2		2										
Solicitors.....	8	20		20										
Stenographers.....	8	3	25	28								1		2
Stock keepers.....	8	3		3										
Superintendents.....	8	1		1										
Supervisors.....	8		14	14					1		4			5
Switchboard men.....	8	15		15										
Teamsters.....	8	3		3										
Testers.....	8	11	1	12						1	1			
Trouble men.....	8	28		28										
Watchmen.....	8	9		9										
Wire chiefs.....	8	23		23					1					
Wire chiefs, assistant.....	8	3		3										
Wiremen.....	8	2		2										
Miscellaneous.....	8	1		1										
Total.....		746	697	1,443	5	5	112	7	113	9	165	4	144	

NEBRASKA TELEPHONE COMPANY, OMAHA, NEBR.

Agents.....	8	1		1										
Cable splicers.....	8	8		8										
Cashiers.....	8		2	2										
Clerks.....	10	1		1										
Do.....	8	11	8	19							1	2	1	
Total.....		12	8	20							1	2	1	
Clerks, chief.....	8	2		2										
Collectors.....	8	6		6						1				
Collectors, chief.....	8	1		1										
Drivers and teamsters.....	10	11		11										
Do.....	8	11		11										
Total.....		22		22										

a Including 1 under \$10.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

MISSOURI AND KANSAS TELEPHONE COMPANY, TOWNS 25,000 POPULATION AND OVER.

Number of employees whose monthly rates were—

\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
						2		2	1	4		1				1		1	
					1			1		3		1				3		1	
		1		1		8		2		16		4		2		4		1	
			2		11											2			
2	7	8	7			12	5	13	3	25		18			2	5		3	
			1	1	6		1	5	1	1						1		6	
					1			1		1		1		1					
										1						3		2	
		1		1				6		9		1		6		2		1	
								3		8		2							
2		2		6		20	1	14		3		3		1		1		3	
1			5		2	1													
15	1	30	7		20	5		78		41									
7		7		62	20	20								1		1		5	
1		1																1	
	41			6		8	1			2					1				
							2		2							1			
						1										2			
	2	1	4	1	6		3	1	6	1		1							
						1		1				1							
	1			1				1											
1		1		1		6		5				1							
						3													
1		3				3		3											
		1				4		8		15									
						7		1		1									
						3		3		11		1		2		2			
						2						1							
								1				1						1	
30	52	62	44	101	27	119	15	154	14	146	3	43		13	3	29		24	

NEBRASKA TELEPHONE COMPANY, OMAHA, NEBR.

						3				1									
									1			2		2			1		
						1													
1	1		4	2	1	2		3		1									
1	1		4	2	1	3		3		1									
						1		3		1		1						1	
												1							
3						1				6						1			
		3								3		5							
3		3				1				9		5				1			

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

NEBRASKA TELEPHONE COMPANY, OMAHA, NEBR.—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Foremen.....	10	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	8	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, assistant.....	8	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	8	11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	8	24	.....	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Instructors.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	8	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laborers.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Linemen.....	10	42	.....	42	.....	.....	.....	.....	.....	.....	.....	.....	32	.....
Do.....	8	52	.....	52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		94	.....	94	.....	.....	.....	.....	.....	.....	.....	.....	32	.....
Managers.....	8	3	.....	3	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Matrons.....	8	.....	3	3	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Messengers.....	8	1	2	3	.....	.....	2	.....	.....	1	.....	.....	.....	.....
Monitors.....	8	1	3	4	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Do.....	7	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		1	4	5	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Operators.....	8	.....	256	256	.....	.....	14	.....	39	.....	52	.....	84	.....
Do.....	7	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Total.....		.....	257	257	.....	.....	14	.....	39	.....	53	.....	84	.....
Operators, chief.....	8	.....	15	15	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Stenographers.....	8	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Stock keepers.....	8	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Students.....	8	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	8	.....	13	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switchboard men.....	8	.....	9	9	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Testers.....	8	.....	13	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trouble men.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	8	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....		255	308	563	.....	.....	18	1	39	4	54	34	88	.....

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY, BOSTON, MASS.

Adjusters.....	8½	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Agents.....	9	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	35	.....	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		44	.....	44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bookkeepers.....	8½	50	11	61	.....	.....	.....	.....	.....	.....	3	1	.....	.....
Cable splicers.....	9	31	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carpenters.....	9½	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	9	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Do.....	8½	1	34	35	.....	.....	.....	.....	.....	.....	1	.....	2	.....
Do.....	8½	181	212	393	.....	2	.....	1	18	4	53	9	9	.....

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

NEBRASKA TELEPHONE COMPANY, OMAHA, NEBR.—Concluded.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
								2		1		1		2		1		2	
								2		1		1		2		3		2	
										1		2		2					
		2				2		2		4		2		2					
					1	4		11		5		2		2					
				2		4		3											
				5		1													
1				9															
				17		8		7		20									
1				26		8		7		20									
	1																	2	
		1																	
			1				1												
				2				1											
		56			9			2											
		56			9			2											
		2			6		1		1		3								
		1			1														
2																			
3								1											
		1																	
			4																
1			3			1		2		1									
								5		1									
								1											
										1								1	
										1									
12	63	12	31	38	6	35	4	35	4	49		18		7		4	1	6	

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY, BOSTON, MASS.

						1				4		1						1	
								1		5		2						1	
						5		13		8		2				6		1	
						5		14		13		4				6		2	
	4	4	3			7		27	1	8		1		1		1			
				1		5		2		6		6				11			
								1		2									
																		1	
	1																		
	3	36	32	26	53	9	4	1	2										
						39	27	49	11	9		10	1	4		5		5	

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY, BOSTON, MASS.—Cont'd.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Clerks	8	4	27	31										
Do.....	7½		25	25									4	
Do.....	7½		1	1										
Do.....	7		5	5									3	
Do.....	6½		4	4										
Do.....	6½		4	4										
Do.....	6		2	2										
Do.....	5		1	1										
Total.....		186	317	503			2		1	18	4	54	9	19
Clerks, chief.....	8½		2	2										
Do.....	8½	10	2	12										
Do.....	5½		1	1										
Total.....		10	5	15										
Clerks, chief, assistant.....	8½	1		1										
Collectors.....	8½	61		61										
Collectors, chief.....	8½	1		1										
Draftsmen.....	8½	1		1										
Drivers and teamsters.....	9	10		10										
Engineers.....	9	5		5										
Do.....	8½	4		4										
Total.....		9		9										
Engineers, assistant.....	8½	1		1										
Foremen.....	9	21		21										
Foremen, assistant.....	9	11		11										
Guard men.....	9	15		15										
Inspectors.....	9	6		6										
Installers.....	9	166		166						11		2		
Do.....	8½	1		1						1				
Do.....	8	1		1										
Total.....		168		168						12		2		
Instructors.....	8		12	12					1					
Janitors.....	9	6		6						1				
Do.....	(a)	24	1	25	1		1	1	5		12		4	
Total.....		30	1	31	1		1	1	5		13		4	
Laborers.....	9	7		7										
Linemen.....	9	188		188										
Machinists.....	9	27		27						5		2		
Matrons.....	8½		7	7										
Do.....	8½		4	4										
Do.....	8		1	1										
Total.....			12	12										
Messengers.....	8½		7	7			7							
Do.....	8½	16	1	17		8	1	7	5		1			
Do.....	8	5		5										
Do.....	7½	1		1				1						
Do.....	5½		2	2		2								
Total.....		22	10	32		2	8	8	13		1			

a Not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY, BOSTON, MASS.—Cont'd

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
2		5		1		1													
3		16				3													
	9		6																
	119		168																
	84		44																
			1																
			3																
	7		1																
1																			
	29		16																
6	248	21	239	1		4													
		2		1		4		6											
		2				6													
	1							1											
								3											
	10		11				7	10		2		1							
								1											
								3											
	11	4	11	1		10	7	9	15		2		1						
							1		2										
5		1																	
5		1																	
								1		1				1		1		1	
			2		11			49		125		1							
			2		11			49		125		1							
	2		7		4		24		9							1			
									1										
	2		7		4		24		10							1			
1						7		2		1									
																		1	
																		1	
																		2	
	3		2		8		54							1					
			6		16		18												
					1		6												
							2												
					4		1												
			3		6		10												
	3		11		35		91							1					

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY, BOSTON, MASS.—Cont'd

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
								3	3	1									
						2		3		17				1					
								2		3		7		2		1		4	
								3		2		3		1		5		5	
								1								1			
								6		5		10		3		7		9	
								1		1									
								3		11		21		1		14		1	
																1		4	
																		2	
																	1		
																1	1	6	
32	343	82	378	60	51	203	169	311	44	317	2	104	2	18		54	1	43	

NEW YORK TELEPHONE COMPANY, NEW YORK, N. Y.

[illegible]

NEW YORK TELEPHONE COMPANY, NEW YORK, N. Y.—Continued.

[illegible]

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

NEW YORK TELEPHONE COMPANY, NEW YORK, N. Y.—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Switchboard men	8	7		7										
Testers	8	25		25										
Treasurers, assistant	7	1		1										
Trouble men	8	76		76										
Waitresses	10	2		2										2
Do.	9	7		7										2
Do.	8	8		8										5
Do.	7	2		2										1
Do.	6	2		2										
Total		21		21										10
Watchmen	8	30		30										
Wire chiefs	8	15		15										
Do.	7	1		1										
Total		16		16										
Wire chiefs, assistant	8	10		10										
Wiremen	8	109		109									1	
Do.	7	1		1										
Total		110		110									1	
Grand total		3,307	4,261	7,568	8	24	27	37	127	58	220	86	1,179	

NORTHWESTERN TELEPHONE EXCHANGE COMPANY, TOWNS UNDER 5,000 POPULATION.

Bookkeepers	8	1	1	2										1
Clerks	9		1	1						1				
Collectors	9	1	1	2								1		
Inspectors	9	2		2										
Installers	9	1		1										
Janitors	9		1	1		1								
Linemen	9	9		9										
Managers	9	4		4										
Do.	8	5		5										
Total		9		9										
Operators	9	43		43	a 1		6		9		23		4	
Do.	8½	9		9			1		3		3		2	
Total		52		52	a 1		7		12		26		6	
Operators, chief	9	10		10							2		3	
Operators, chief, assistant ..	9	1		1									1	
Trouble men	9	2		2										
Wire chiefs	9	4		4										
Grand total		29	67	96	b 2		7		13		29		11	

a Under \$10.

b Including 1 under \$10.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

NEW YORK TELEPHONE COMPANY, NEW YORK, N. Y.—Concluded.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
.....	.....	1	.....	.....	.....	6	.....	1	.....	3	.....	4	.....	2	.....	2	.....	1	.....
.....	.....	.....	.....	.....	.....	10	.....	3	.....	61	.....	.....	.....	2	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	3	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
.....	.....	.....	.....	.....	.....	1	.....	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	15	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	.....
.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	.....	1	.....
1	.....	.....	.....	.....	.....	28	.....	29	.....	46	.....	3	.....	1	.....	.....	.....	.....	.....
1	.....	.....	.....	.....	.....	28	.....	30	.....	46	.....	3	.....	1	.....	.....	.....	.....	.....
52	953	73	956	67	274	485	182	617	261	647	32	349	22	330	17	257	2	225	1

**NORTHWESTERN TELEPHONE EXCHANGE COMPANY, TOWNS UNDER 5,000
POPULATION.**

[illegible]

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

NORTHWESTERN TELEPHONE EXCHANGE COMPANY, TOWNS 25,000 POPULATION AND OVER—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Laborers.....	9	1		1										
Linemen.....	9	47		47										
Managers.....	9	1		1										
Do.....	8	3		3										
Total.....		4		4										
Matrons.....	9		3	3										
Messengers.....	9		1	1				1						
Do.....	8	4		4				2			1		1	
Total.....		4	1	5				1	2		1		1	
Monitors.....	9	1	4	5								1		1
Operators.....	9		309	309				20				56		112
Do.....	8½		15	15						75		3		6
Do.....	8		1	1										
Total.....			325	325				20		78		59		118
Operators, chief.....	9		15	15										1
Do.....	8		2	2										
Total.....			17	17										1
Operators, chief, assistant..	9		2	2										
Operators, student.....	7		11	11										
Repair men.....	9		28	28										
Solicitors.....	8		4	14										
Stenographers.....	8		2	19							1			
Stock keepers.....	9		2	2										
Superintendents.....	8		1	1										
Supervisors.....	9			36								1		2
Switchboard men.....	9		16	16									1	
Teamsters.....	9		1	1										
Testers.....	9		7	7									1	
Watchmen.....	9		1	1										
Wire chiefs.....	9		10	10										
Miscellaneous.....	9		10	10										
Do.....	8		3	3										
Total.....			13	13										
Grand total.....		339	479	818		11	1	21	2	78	7	68	5	134

PACIFIC TELEPHONE AND TELEGRAPH COMPANY, LOS ANGELES, CAL.

Adjusters.....	8	3		3										
Agents.....	8	14		14										
Battery men.....	8	2		2									2	
Cable spicers.....	8			41										
Carpenters.....	8	41		4										
Cashiers.....	8		1	2										
Clerks.....	8	42	28	70							2			1
Clerks, chief.....	8	2		2										

a Under \$10.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

NORTHWESTERN TELEPHONE EXCHANGE COMPANY, TOWNS 25,000 POPULATION AND OVER—Concluded.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1																			
		2		16		3		7		18		1							
												1						1	
																2			
												1				2		1	

PACIFIC TELEPHONE AND TELEGRAPH COMPANY, LOS ANGELES, CAL.

								1		2									
										11			2					1	
						20		5							1		15		
						1		1					1		2			1	
1	10	1	4		4	11	6	13	1	9		4		2	2		1		
												1		1					

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

PACIFIC TELEPHONE AND TELEGRAPH COMPANY, LOS ANGELES, CAL.—Concluded.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
										1						1			
										1						34		1	
						3		1		1					29				
						3		1		2		1			25				
				1	1	4		1											
						1													
						25		5		6					43				
	3				1													1	
	94 1		51 1		18 1 2		1	4 1		1 4		1		1					
2																			
	1		3				2	4		1			1 1		24				
	4		9		14			7		2									
															7				
1						2 5		14		8			1		1				
															9				
					1	1 1				1					2		4		
			1						1										
	1														1		6		
				1		4		2		2				1 1					
4	114	1	69	2	42	83	23	45	7	46	1	12	1	149	....	64	....	2	....

PACIFIC TELEPHONE AND TELEGRAPH COMPANY, PORTLAND, OREG.

					1				8						1		1
							1								7		
1	7	1	5	4	2	3	15 1 11	3	4	1	1 1 1		2	1	1 1 1		
									3								
					4				1						1		
								3									
									3						12		2
								3	3						12		2
								2					1				
							1		8		1 1		5				

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

PACIFIC TELEPHONE AND TELEGRAPH COMPANY, SAN FRANCISCO, CAL.—Concl'd.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Clerks.....	8	51	74	125							1	7	3	2
Clerks, chief.....	8	3		3										
Collectors.....	8	32		32										
Collectors, chief.....	8	1		1										
Draftsmen.....	8	1		1										
Elevator conductors.....	12	1		1										
Engineers.....	12	1		1										
Foremen.....	8	60		60										
Inspectors.....	8	42	2	44										
Inspectors, chief.....	8	1		1										
Installers.....	8	85		85										
Instructors.....	8	1	6	7										
Janitors.....	12	18		18										
Do.....	8	2		2										
Total.....		20		20										
Laborers.....	8	89		89										
Do.....	12	2		2										
Total.....		91		91										
Linemen.....	8	100		100										
Machinists.....	8	2		2										
Managers.....	8	1		1										
Matrons.....	8		6	6										3
Messengers.....	8	18		18	2		1				13		2	
Monitors.....	8		2	2										
Operators.....	8	3	506	509	a 1						196		1	83
Operators, chief.....	8	1	16	17										
Operators, chief, assistant.....	8		6	6										
Operators, student.....	8		74	74							73			
Painters.....	8	6		6										
Repair men.....	8	33		33										
Stenographers.....	8	1	20	21										
Stock keepers.....	8	6		6										
Superintendents.....	8	1		1										
Supervisors.....	8		50	50										
Switchboard men.....	8	25		25										
Switchboard men, apprentice.....	8	3		3										
Switchboard men, helper.....	8	5		5										
Switchboard men, junior.....	8	2		2										
Telegraph operators.....	8	2	3	5										
Terminal men.....	8	11		11										
Testers.....	8	15		15										
Trouble men.....	8	6		6										
Watchmen.....	12	2		2										
Do.....	8	1		1										
Total.....		3		3										
Wire chiefs.....	8	4		4										
Wiremen.....	8	3		3										
Miscellaneous.....	8	15	1	16										
Grand total.....		785	766	1,551	2	a 1	1				14	276	6	88

a Under \$10.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

PACIFIC TELEPHONE AND TELEGRAPH COMPANY, SAN FRANCISCO, CAL.—Concl'd.

[illegible]

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

PACIFIC TELEPHONE AND TELEGRAPH COMPANY, SEATTLE, WASH.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Agents.....	8	12	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Battery men.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bookkeepers.....	8	4	2	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cable splicers.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carpenters.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	8	14	30	44	.....	.....	.....	.....	.....	.....	2	.....	7	.....
Clerks, chief.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors.....	8	13	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors, chief.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Draftsmen.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Drivers.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen.....	8	16	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, general.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	8	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	8	17	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Instructors.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	8	4	1	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Linemen.....	8	52	.....	52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laborers.....	8	28	.....	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	8	7	.....	7	.....	.....	.....	.....	2	.....	3	.....	1	.....
Messengers.....	8	6	.....	6	.....	.....	.....	.....	2	.....	4	.....	.....	.....
Monitors.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators.....	8	267	.....	267	.....	.....	.....	.....	.....	.....	86	.....	47	.....
Operators, chief.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators, chief, assistant.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators, student.....	8	30	.....	30	.....	.....	.....	.....	30	.....	.....	.....	.....	.....
Repair men.....	8	24	.....	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stock keepers.....	8	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	8	27	.....	27	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Switchboard men.....	8	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switchboard men, apprentice.....	8	27	.....	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switchboard men, helper.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switchboard men, junior.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Telegraph operators.....	8	1	3	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers.....	8	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers, chief.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Traffic chiefs.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trouble men.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Watchmen.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	8	8	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	284	389	673	.....	.....	.....	.....	2	32	4	91	.....	56

ROCKY MOUNTAIN BELL TELEPHONE COMPANY, SALT LAKE CITY, UTAH.

Accountants.....	8	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Agents.....	8	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bookkeepers.....	8	5	1	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bricklayers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cable splicers.....	8	13	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carpenters.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	54	21	75	2	.....	.....	.....	.....	.....	1	.....	3	3
Total.....	.....	54	23	77	.....	.....	.....	.....	.....	.....	1	.....	3	3

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE-SYSTEM—Continued.

ROCKY MOUNTAIN BELL TELEPHONE COMPANY, SALT LAKE CITY, UTAH—Concl'd.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Clerks, chief.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors.....	8	12	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Draftsmen.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elevator conductors.....	10	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Engineers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Engineers, assistant.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen.....	8	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, general.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hostlers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	9	22	.....	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	10	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors, chief.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Linemen.....	8	29	.....	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Messengers.....	8	2	.....	2	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Monitors.....	8½	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Operators.....	9	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Do.....	8½	.....	66	66	.....	.....	.....	.....	.....	.....	.....	15	.....	13
Do.....	8	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	.....	2	2	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Total.....	.....	.....	82	82	.....	.....	.....	.....	.....	.....	.....	17	.....	16
Operators, chief.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators, student.....	8½	.....	3	3	.....	.....	.....	.....	3	.....	.....	.....	.....	.....
Secretaries, assistant.....	8	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8	1	9	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stock keepers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Superintendents.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	10	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Switchboard men.....	9	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers.....	9	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Treasurers, assistant.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trouble men.....	9	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	12	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....	.....	207	138	345	.....	.....	.....	.....	2	3	3	17	3	20

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

ROCKY MOUNTAIN BELL TELEPHONE COMPANY, SALT LAKE CITY, UTAH—Concl'd.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
							3		4		4				3		2		1
				1							1					1			
									1						4		2		1
						1			1									1	
				3		3	2		12		3				1				
						12							1		16				
	1												1						
	1																		
	4																		
	38																		
	1		6																
	43		6																
							1												
									1										
											3								

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY, ATLANTA, GA.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Adjusters.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Agents.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cable splicers.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	12	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	11	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	13	7	20	.....	.....	.....	.....	1	.....	.....	.....	.....	3
Do.....	8½	1	3	4	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Do.....	8	6	4	10	.....	.....	.....	.....	1	.....	.....	.....	1	.....
Do.....	8	1	1	2	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Do.....	6	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	4	1	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Total.....	.....	22	17	39	.....	.....	1	.....	.....	4	.....	.....	1	3
Clerks, chief.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	9	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	9	1	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Laborers.....	9	4	.....	4	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Linemen.....	9	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Messengers and office boys.....	8	2	.....	2	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Do.....	6½	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	3	.....	3	.....	.....	2	.....	1	.....	.....	.....	.....	.....
Monitors.....	8½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators.....	9	1	72	73	.....	.....	8	1	22	.....	26	.....	12	.....
Do.....	8½	.....	66	66	.....	.....	8	.....	17	.....	21	.....	18	.....
Total.....	.....	1	138	139	.....	.....	16	1	39	.....	47	.....	30	.....
Operators, chief.....	9	.....	5	5	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Do.....	8½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	6	6	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Operators, chief, assistant..	8½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Repair men.....	9	21	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Superintendents.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	13	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Testers.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Traffic chiefs.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waitresses.....	8½	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....	.....	85	179	264	.....	.....	3	17	2	43	1	49	3	33

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY, BIRMINGHAM, ALA.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Agents.....	10	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bookkeepers.....	10	4	3	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cable splicers.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	10	3	6	9	.....	.....	.....	.....	.....	.....	1	.....	2	.....
Do.....	9	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		12	6	18	.....	.....	.....	.....	.....	.....	1	.....	2	.....
Collectors.....	10	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	9	4	1	5	.....	.....	1	1	.....	1	.....	.....	.....	.....
Laborers.....	9	10	.....	10	.....	.....	.....	.....	.....	8	.....	1	.....	.....
Linemen.....	9	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Messengers.....	9	.....	2	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Monitors.....	10	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators.....	13	.....	6	6	.....	.....	2	.....	2	.....	2	.....	.....	.....
Do.....	10	.....	60	60	.....	.....	5	.....	17	.....	27	.....	11	.....
Do.....	9½	.....	6	6	.....	.....	.....	.....	6	.....	.....	.....	.....	.....
Do.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	73	73	.....	.....	7	.....	25	.....	29	.....	11	.....
Operators, chief.....	10	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Repair men.....	13	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	17	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		18	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	10	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	10	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Traffic chiefs.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wire chiefs.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Miscellaneous.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....		69	96	165	.....	.....	10	1	25	9	30	1	16	.....

SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY, RICHMOND, VA.

Clerks.....	9	.....	2	2	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Monitors.....	9	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Operators.....	9	.....	45	45	.....	.....	.....	.....	15	.....	21	.....	4	.....
Do.....	(a)	.....	12	12	.....	.....	.....	.....	2	.....	4	.....	5	.....
Total.....		.....	57	57	.....	.....	.....	.....	17	.....	25	.....	9	.....
Operators, chief.....	9	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators, chief, assistant.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....		.....	68	68	.....	.....	.....	.....	17	.....	26	.....	10	.....

a Not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY, BIRMINGHAM, ALA.

[illegible]

SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY, RICHMOND, VA.

[illegible]

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

SOUTHWESTERN TELEGRAPH AND TELEPHONE COMPANY, DALLAS, TEX.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Agents.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bookkeepers.....	8½	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cable splicers.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cashiers.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	9	5	10	15	.....	.....	.....	.....	.....	.....	3	.....	3	.....
Do.....	8½	13	8	21	.....	.....	.....	.....	1	.....	1	.....	1	.....
Total.....	.....	18	18	36	.....	.....	.....	.....	1	.....	4	.....	1	4
Clerks, chief.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors.....	8½	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors, chief.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elevator conductors.....	10½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen.....	9½	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, general.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	9	10	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Instructors.....	8	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	10	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Do.....	9	.....	2	2	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Total.....	.....	9	2	11	.....	.....	.....	.....	2	.....	.....	.....	1	.....
Linemen.....	9	16	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Managers.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	9	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Messengers.....	9	1	5	6	.....	.....	.....	.....	1	5	.....	.....	.....	.....
Do.....	8	.....	2	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Total.....	.....	1	7	8	.....	.....	.....	.....	1	7	.....	.....	.....	.....
Monitors.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators.....	9	.....	136	136	.....	.....	.....	.....	32	.....	41	.....	43	.....
Do.....	8½	.....	13	13	.....	.....	.....	.....	5	.....	6	.....	2	.....
Do.....	8	.....	47	47	.....	.....	.....	.....	10	.....	7	.....	23	.....
Do.....	7½	.....	2	2	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Do.....	6½	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	6	.....	36	36	.....	.....	.....	.....	20	.....	14	.....	2	.....
Total.....	.....	.....	235	235	.....	.....	.....	.....	67	.....	70	.....	71	.....
Operators, chief.....	9	4	2	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	5	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	4	3	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators, student.....	8	.....	6	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	11	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	11	11	.....	.....	.....	.....	.....	.....	2	.....	1	.....
Total.....	.....	.....	22	22	.....	.....	.....	.....	.....	.....	2	.....	1	.....

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

SOUTHWESTERN TELEGRAPH AND TELEPHONE COMPANY, DALLAS, TEX.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
								1											
				1				1		1									
																1			
3	3			1	1	1	2	4	1	1	2								
3	6	2		1	1	3	2	4	1	3									
		1		4		3				1				1					
		1						1											
				2		2		3		4		1				1			
			1				2	1		3	1								
6		1		1															
6		1		1															
				6		1				9									
																1		1	
																1		1	
	1		1																
				1															
	18		2																
	7																		
	25		2																
				1	1		1	1	1	1	1								
	1																		
	1			1	1		1	1	1	1	1								
	1							1											
								1											
	1																		
	5		6																
	8																		
	13		6																

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

BELL TELEPHONE SYSTEM—Concluded.

SOUTHWESTERN TELEGRAPH AND TELEPHONE COMPANY, DALLAS, TEX.—Concl'd.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
					1		1												
			1		1														
			1		2		1												
1		1					3		2		1								
											1								
			1		1														
			1		1						1								
									1		1		1						
									1		2								
10	47	7	13	18	3	13	6	17	2	26		2		1		3		1	

INDEPENDENT TELEPHONE COMPANIES.

HOME TELEPHONE COMPANY, KANSAS CITY, MO.

[illegible]

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

INDEPENDENT TELEPHONE COMPANIES—Continued.

HOME TELEPHONE COMPANY, KANSAS CITY, MO.—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Messengers.....	8½	3		3			2		1					
Do.....	8		2	2							1		1	
Total.....		3	2	5			2		1		1		1	
Operators.....	8		365	365					111		195		59	
Operators, chief.....	8	1	17	18							3		4	
Operators, chief, assistant.....	8		4	4									1	
Operators, senior.....	8		33	33							1		32	
Repair men.....	9	15		15										
Do.....	8	1		1										
Total.....		16		16										
Solicitors.....	8½	3		3										
Stenographers.....	8½	1	3	4										
Stock keeper.....	9	1		1										
Do.....	8½	1		1										
Total.....		2		2										
Superintendents.....	8½	3		3										
Supervisors.....	8		53	53					2		9		27	
Switchboard men.....	9	3		3										
Wire chiefs.....	9	6		6										
Wire men.....	9	3		3										
Miscellaneous.....	9	17		17							1		3	
Grand total.....		196	495	691			2		1	113	3	210	7	135

HOME TELEPHONE COMPANY, LOUISVILLE, KY.

Clerks.....	9		5	5					1				3	
Do.....	5		3	3				1				2		
Total.....			8	8				1		1		2		3
Monitors.....	9		1	1										1
Operators.....	9		64	64			5		25		34			
Do.....	8		8	8			1		4		3			
Do.....	7		15	15			15							
Do.....	5		38	38		38								
Total.....			125	125		38		21		29		37		
Operators, chief.....	9		1	1										
Do.....	8		1	1										
Do.....	5		1	1									1	
Total.....			3	3										1
Operators, chief, assistant....	9		1	1										
Do.....	8		1	1							1			
Total.....			2	2							1			
Supervisors.....	9		6	6										3
Do.....	5		3	3							2		1	
Total.....			9	9							2		4	
Grand total.....			148	148		38		22		30		42		9

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd

INDEPENDENT TELEPHONE COMPANIES—Concluded.

MARYLAND TELEPHONE COMPANY, BALTIMORE, MD.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Clerks.....	9½	.....	2	2	.....	.....	.....	.....	1	.....	1	.....	.....	.....
Matrons.....	9½	.....	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Monitors.....	9½	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Operators.....	10	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	9½	1	53	54	1	.....	1	.....	14	.....	35	.....	1	.....
Do.....	9	.....	23	23	.....	.....	13	.....	7	.....	3	.....	.....	.....
Total.....		1	77	78	1	.....	14	.....	21	.....	39	.....	1	.....
Operators, chief.....	9½	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	9	.....	4	4	.....	.....	.....	.....	1	.....	1	.....	.....	.....
Total.....		.....	5	5	.....	.....	.....	.....	1	.....	2	.....	.....	.....
Operators, student.....	9	.....	1	1	.....	a 1	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Miscellaneous.....	(b)	1	1	2	1	a 1	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....		2	91	93	2	a 2	.....	15	.....	24	.....	42	.....	2

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

BOSTON, MASS.

Clerks.....	9	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Do.....	6	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	8	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Clerks, chief.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Instructors.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators.....	9	.....	38	38	.....	.....	.....	.....	.....	.....	8	.....	7	.....
Do.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Do.....	6½	.....	6	6	.....	.....	.....	.....	.....	.....	6	.....	.....	.....
Do.....	6	.....	5	5	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Total.....		.....	51	51	.....	.....	.....	.....	.....	.....	17	.....	8	.....
Operators, chief.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators, chief assistant...	8	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Telegraph operators.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Traffic chiefs.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....		.....	5	73	78	.....	.....	.....	.....	.....	17	.....	11	.....

a Under \$10.

b Not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

INDEPENDENT TELEPHONE COMPANIES—Concluded.

MARYLAND TELEPHONE COMPANY, BALTIMORE, MD.

[illegible]

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

BOSTON, MASS.

			1		2														
	1				1														
		1		1	3														
							1							1					
							1							1					
													1				1		
		11		9	2		1			1									
		3																	
		14		9	2		1												
				1								1			1				
				1								1			1				
										1					1				
					1			3											
			1				1												
				1		1		4											
								1											
								1										1	
		15		12		6		8		2		1	2	1	1		2		

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Continued.

CHICAGO, ILL.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Clerks.....	9	1	4	5										
Do.....	8	4	10	14							1		2	
Total.....		5	14	19							1		2	
Clerks, chief.....	8½	1		1										
Do.....	8		1	1										
Total.....		1	1	2										
Examiners.....	9		1	1										
Do.....	6		1	1										
Total.....			2	2										
Inspectors.....	8	1		1										
Instructors.....	9		1	1										
Matrons.....	7		1	1										
Do.....	5		1	1							1			
Total.....			2	2							1			
Messengers.....	8½		2	2			2							
Do.....	8	1		1				1						
Do.....	6		2	2			2							
Total.....		1	4	5			4	1						
Monitors.....	9		1	1										
Do.....	6		1	1										
Total.....			2	2										
Operators.....	9		69	69					1		39		6	
Do.....	8½		1	1										
Do.....	7½		1	1										
Do.....	6		32	32							15		4	
Total.....			103	103					1		54		10	
Operators, chief.....	8		1	1										
Do.....	7½		1	1										
Do.....	6		1	1										
Total.....			3	3										
Operators, chief, assistant ..	8½		1	1										
Stenographers.....	8		2	2										
Supervisors.....	9		2	2										
Do.....	8½		5	5										
Do.....	6½		2	2										
Do.....	6		4	4										
Total.....			13	13										
Telegraph operators.....	8		1	1										
Traffic chiefs.....	7	1		1										
Traffic chiefs, assistant.....	8½	1		1										
Grand total.....		10	149	159			4	1	1		56		12	

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Continued.

CHICAGO, ILL.

[illegible]

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Continued.

CINCINNATI, OHIO.

[illegible]

KANSAS CITY, MO.

[illegible]

MINNEAPOLIS, MINN.

[illegible]

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Continued.

NEW YORK, N. Y.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Clerks.....	10	.....	8	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	2	5	7	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	7	1	6	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	3	21	24	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Clerks, chief.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	2	2	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Instructors.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matrons.....	9	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Messengers.....	8½	2	.....	2	.....	.....	1	.....	1	.....	.....	.....	.....	.....
Operators.....	10	.....	126	126	.....	.....	.....	.....	.....	.....	12	.....	7	.....
Do.....	9	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Do.....	7	.....	30	30	.....	.....	.....	.....	.....	.....	4	.....	7	.....
Do.....	6½	.....	24	24	.....	.....	.....	.....	.....	.....	.....	.....	6	.....
Total.....	.....	.....	187	187	.....	.....	.....	.....	.....	.....	16	.....	21	.....
Operators, chief.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Operators, chief, assistant.....	9	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	8	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Supervisors.....	9	.....	28	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	36	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Telegraph operators.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Traffic chiefs.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	5	1	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand total.....	.....	13	261	274	.....	.....	1	.....	1	.....	1	16	.....	21

PHILADELPHIA, PA.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
			9		3			1											
			1																
			10		3			1											
								1	1										
								1	1										
	16		9		3														
	2																		
	1		3																
	4		3																
	23		15		3														
										1									
								1	1										
								2	1										
					1														
			1		4			4											
			1		1														
			2		5			4											
															1		1		
	23		27		12			6	2	3		1			1		1		

[illegible]

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

A.—CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Cont'd.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Concluded.

PITTSBURG, PA.—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Stenographers.....	8½		1	1										
Supervisors.....	9		4	4										
Do.....	7		1	1										
Total.....			5	5										
Telegraph operators.....	8		1	1										
Traffic chiefs.....	8½	1		1										
Grand total.....		3	46	49						3		5		10

ST. LOUIS, MO.

Clerks.....	8½		3	3										
Instructors.....	8½		1	1										
Messengers.....	10½		1	1			1							
Operators.....	9		17	17							3		6	
Do.....	8½		3	3									2	
Total.....			20	20							3		8	
Operators, chief.....	8½		1	1										
Stenographers.....	8½		1	1										
Supervisors.....	9		2	2										
Do.....	7		1	1										
Total.....			3	3										
Traffic chiefs, assistant.....	9	1		1										
Grand total.....		1	30	31			1				3		8	

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS.

BELL TELEPHONE SYSTEM.

Accountants.....	8½	4		4										
Do.....	8	7		7										
Do.....	7½		1	1										
Do.....	7	4		4										
Total.....		15	1	16										
Adjusters.....	8½	10		10										
Do.....	8	28												
Total.....		38		38										
Agents.....	10	5		5										
Do.....	9	10		10										
Do.....	8½	60		60										
Do.....	8½	1		1										
Do.....	8	152	2	154							1			
Do.....	7	141		141										
Total.....		369	2	371							1			

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Assemblers.....	9	14		14							1			
Do.....	8	2		2										
Total.....		16		16							1			
Battery men.....	10	2		2										
Do.....	9	4		4										
Do.....	8	27		27									2	
Total.....		33		33									2	
Blacksmiths.....	12	1		1										
Do.....	9	2		2										
Do.....	8	4		4										
Total.....		7		7										
Blue printers.....	8 ¹ / ₂	1		1						1				
Do.....	8	2		2				1						
Do.....	7	3		3									1	
Total.....		6		6				1		1			1	
Bookkeepers.....	10	4	3	7										
Do.....	9	4	1	5										
Do.....	8 ¹ / ₂	79	14	93						1	3	1		
Do.....	8 ¹ / ₄	2		2										
Do.....	8	168	41	209	a 2		1		4		13	1	11	
Total.....		257	59	316	a 2		1		4	1	16	2	11	
Bricklayers.....	10	2		2										
Do.....	9	1		1										
Do.....	8	3		3										
Total.....		6		6										
Cabinetmakers.....	9	1		1										
Cable splicers.....	10	33		33										
Do.....	9	126		126										
Do.....	8	557		557										
Total.....		716		716										
Carpenters.....	10	1		1										
Do.....	9 ³ / ₄	3		3										
Do.....	9	7		7										
Do.....	8	41		41										
Total.....		52		52										
Cashiers.....	10	1		1										
Do.....	9	2		2										
Do.....	8 ¹ / ₂	4	1	5							1			
Do.....	8 ¹ / ₄	1		1										
Do.....	8	32	15	47									1	
Do.....	7	7	1	8										
Total.....		47	17	64							1		1	

a Including 1 under \$10.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1		1		3		6		2											
1						1													
2		1		3		7		2											
						1		1											
				1		3		3		10		1		2		3			
				2		3		4											
				3		7		5		10		1		2		3			
																		1	
						1		1				1							
						3		3											
						1		4				1						1	
		1				1		1											
		1				1		1											
1			2			1		2				1							
	4	5	5	2	1	9		1		17		3		1		3		1	
1	3	1	1	1	3	11		27	1	93	2	17		7		7		2	
2	7	6	8	5	5	21	1	67	2	111	2	21		8		10		3	
						1						1						1	
																		3	
						1						1						4	
						1													
13				2		4		2		11		1							
				5		34		12		17		17		30		11			
5		1		2		207		75		51		41		63		112			
18		1		9		245		89		79		59		93		123			
								1											
								1		2									
1						2				3				1					
						1		4		13		2		7		2		12	
1						3		6		18		2		8		2		12	
						1												1	
								1										1	
	1		4			2	6	6	1	3	1	6		3		6	1	6	
							1			1		2		3		1			
	1		4			3	7	7	1	4	1	8		6		9	1	10	

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Chauffeurs, drivers, hostlers, and stablemen.	12	19	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	62	.....	62	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	18	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	54	.....	54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	(a)	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		168	.....	168	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks.....	12	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	11	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	15	45	60	.....	.....	.....	.....	.....	1	4	.....	12	.....
Do.....	9	221	282	503	.....	.....	1	.....	1	3	1	15	8	53
Do.....	8½	1	34	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Do.....	8½	b 304	b 310	644	.....	.....	3	.....	1	18	8	66	13	34
Do.....	8½	13	8	21	.....	.....	.....	.....	.....	.....	.....	1	1	1
Do.....	8	1,477	767	2,244	.....	5	6	9	6	33	19	87	35	102
Do.....	7½	.....	34	34	.....	.....	.....	1	.....	.....	.....	2	.....	4
Do.....	7½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	610	357	967	.....	.....	.....	.....	15	11	10	54	36	104
Do.....	6½	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6½	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Do.....	6	.....	3	3	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Do.....	5	.....	2	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Do.....	4	.....	2	2	.....	1	.....	.....	1	.....	.....	.....	.....	.....
Do.....	(a)	7	6	13	.....	.....	.....	.....	.....	.....	1	3	2	.....
Total.....		b2,650	b1,861	4,541	.....	6	10	11	24	67	39	232	96	314
Clerks, chief.....	10	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	1	16	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	21	2	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	79	12	91	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	5½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		118	37	155	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clerks, chief, assistant.....	9	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		4	2	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Collectors.....	10	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	4	2	6	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Do.....	8½	78	.....	78	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	329	43	372	1	1	.....	3	.....	13	6	10	2	6
Do.....	7	67	.....	67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		491	45	536	1	1	.....	3	.....	13	6	11	2	7
Collectors, chief.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Not reported.

b Not including 30, sex not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

[illegible]

BELL TELEPHONE SYSTEM—Continued.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
			2		2		3					1							
				1		49		6											
						8													
				1		57		6											
1						1													
1		2			1	8		3		1	1			4		2			
								11		13	1	10		3		1			
								2		2		3		3					
2		2			1	9		16		15	1	13		7		3			
										1				1				1	
																		1	
										1				2				2	
1		1				1		3		2		1				1		1	
										2									
1		1				4				4		1				1		1	
										2									
4		1																	
		1				4		1											
				1		4													
						1													
4		2		2		9		1		2									
						1		1				2							
								5		1									
						3		3		3		2		1		1		1	
								2		2		1		1		6		8	
						1		6		4		3		9		10		16	
						2		2		8		2		13		9		26	
						7		19		18		10		24		26		51	
								2		3				1					
												1		1		1			
								3		9		21		15		11		2	
																		15	
								5		12		22		17		12		17	
										1		7							
										2				1		1			
						1		2		1									
1						5		22		38		14		1		5		8	
										7		42		26		3		2	
		1		3		5		21	1	33		47		106		178		34	
																	7		
1		1		3		11		45	1	79		103		134		186		51	

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Foremen, assistant.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	13	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	25	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		39	.....	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, general.....	10	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		21	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Foremen, general, assistant.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Frame men.....	9	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	29	.....	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		36	.....	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guard men.....	9	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inspectors.....	10	51	.....	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	151	.....	151	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	8½	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	533	4	537	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Do.....	7½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	16	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	(a)	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		768	4	772	.....	.....	.....	.....	.....	.....	2	.....	1	.....
Inspectors, chief.....	8½	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	8	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		11	.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Installers.....	10	36	.....	36	.....	.....	.....	.....	.....	.....	2	.....	2	.....
Do.....	9	353	.....	353	.....	.....	.....	.....	.....	.....	11	.....	2	.....
Do.....	8½	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	1,066	.....	1,066	.....	.....	.....	.....	.....	.....	1	.....	11	.....
Total.....		1,460	.....	1,460	.....	.....	.....	.....	.....	.....	15	.....	15	.....
Installers, chief.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Instructors.....	9	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	1	4	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	3	44	47	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Total.....		4	50	54	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Instructors, manager.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Investigators, claims dept.....	8	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Janitors.....	15	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	12	18	.....	18	.....	.....	.....	.....	.....	.....	6	.....	1	.....
Do.....	10	49	19	68	.....	1	.....	2	.....	2	.....	6	1	.....
Do.....	9	94	25	119	b 1	e 5	.....	2	2	2	5	15	1	7
Do.....	8½	3	.....	3	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Do.....	8	122	18	140	d 11	e 2	5	4	7	2	5	2	5	5
Do.....	6½	10	.....	10	.....	.....	.....	.....	.....	.....	.....	9	.....	.....
Do.....	6	2	.....	2	.....	.....	.....	.....	.....	.....	1	.....	.....	1

a Not reported.

b Under \$10.

c Including 4 under \$10.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
						1		1		3		1		5		2		1	
						2		2		10		6		3		2			
						3		3		13		7		8		4		1	
																		2	
										1		1		2		3		2	
														1		1		2	
																2		2	
																4		4	
										1		1		3		6		10	
																1			
		6				1													
		1				4		14		9				1					
		7				5		14		9				1					
				13		2													
1				3		10		15		15		6		1					
1				4		31		75		31		4				4			
4		4	1	3		3	1	2		4		1		1		3		1	
						80		138		119		60		81	2	35		7	
						1		1		5		4		1		3		2	
								1											
6		4	1	10		125	1	232		174		75		84	2	45		10	
												1						2	
																5		3	
												1				5		5	
1		11		5		13				2									
19		5		56		92		100		59		7		2					
						3		1											
9		17		16		249		288		261		94		111		9			
29		33		77		357		389		322		101		113		9			
																2			
					1			1								1			
	1				9	10		13		6		2		1		3	1		
	2		9		11		15		7		3		1			4	1		
																		1	
								1				1		1		3			
						1													
6	1	3		18		19		14		4									
3		8		13		60		2											
								1											
5	2	10	1	19		40		11		2		1		1					
	1																		

d Including 7 under \$10.

e Including 1 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Janitors.....	5	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	4	.....	1	1	a 1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	3½	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	3	.....	11	11	.....	2	.....	2	.....	2	.....	3	.....	2
Do.....	2½	.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	2	.....	9	10	1	b 7	.....	2	.....	.....	.....	.....	.....	.....
Do.....	1	.....	1	1	a 1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	(c)	26	3	29	d 2	a 2	1	1	5	.....	12	.....	4	.....
Total.....		311	105	416	e 15	f 23	6	13	14	9	22	39	11	16
Janitors, chief.....	8	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laborers.....	12	.....	3	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	160	.....	160	.....	.....	.....	.....	.....	.....	3	.....	3	.....
Do.....	9	145	.....	145	.....	.....	.....	.....	.....	.....	8	.....	4	.....
Do.....	8½	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	495	1	496	a 1	.....	.....	.....	.....	.....	4	.....	18	.....
Do.....	(c)	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		807	1	808	a 1	.....	.....	.....	.....	.....	15	.....	25	.....
Linemen.....	10	121	.....	121	.....	.....	.....	.....	.....	.....	1	.....	32	.....
Do.....	9	631	.....	631	.....	.....	.....	.....	.....	.....	.....	.....	4	.....
Do.....	8	1,276	.....	1,276	.....	.....	.....	.....	.....	.....	5	.....	4	.....
Total.....		2,028	.....	2,028	.....	.....	.....	.....	.....	.....	6	.....	40	.....
Machinists.....	9	30	.....	30	.....	.....	.....	.....	.....	.....	5	.....	2	.....
Do.....	8	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		37	.....	37	.....	.....	.....	.....	.....	.....	5	.....	2	.....
Managers.....	10	7	.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	29	1	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	19	2	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	181	8	189	2	.....	1	.....	2	.....	.....	.....	2	2
Do.....	7	20	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	5	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		258	11	269	2	.....	1	.....	2	.....	.....	.....	2	2
Managers, assistant.....	10	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	8	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	36	4	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	7	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		59	4	63	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Matrons.....	12	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Do.....	10	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
Do.....	9½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Do.....	9	.....	35	35	.....	2	.....	.....	2	.....	8	.....	10	.....
Do.....	8½	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	.....	27	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	67	67	.....	.....	3	.....	9	.....	6	.....	21	.....
Do.....	7	.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
Do.....	6½	.....	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Do.....	5	.....	16	16	.....	.....	.....	.....	.....	.....	16	.....	.....	.....
Total.....		166	.....	166	.....	2	.....	4	.....	11	.....	32	.....	38

a Under \$10.

b Including 5 under \$10.

c Not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
2																			
16	4	21	1	50	....	120	....	28	....	6	....	1	....	1	....			
														1	....			
2				115		31		3		2									
9		1		23		99				3									
35	1	46		2		189		96		9		1							
				96		2													
46	1	47	....	236	....	322	....	99	....	15	....	1	....					
24				10		18		35		1									
14		6		62		137		149		219		40							
32		12		116		205		235		341		119		196		11			
70		18	....	188	....	360	....	419	....	561	....	159	....	196	....	11	....	
5				5		6		6		1		1				1			
						1		1		2				1					
5				5		7		7		3		1		1		1			
				1		1		2		3		2				5		1	
						4		2		2		8		3		3		2	
	1	1										2						6	
				2		16	3	17		35		28		7		29		1	
						8		3		3		1		1		1		41	
								1										3	
	1	1	....	1	2	29	3	25	....	51	1	41	....	11	....	38	....	54	2
								1				2				1			
												4				3			
	1	2		1	3			5	1	2		3		1		2		1	
										4		5		5		12			
												1						2	
	1	2	....	1	3			6	1	6	....	15	....	6	....	18	....	3	....
	3			1															
	5		5	2				1											
			3					4											
	6		10	5				5											
	17		3	4				1						3					
	31	....	21	....	12	....	12	....		....		3	....		....	

^d Including 1 under \$10.^e Including 9 under \$10.^f Including 14 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Messengers.....	10	24	2	26	3	.....	10	2	1	.....	4	.....	5	.....
Do.....	9	53	9	62	4	.....	8	3	7	6	24	.....	9	.....
Do.....	8 ³ / ₄	.....	7	7	.....	.....	.....	7	.....	.....	.....	.....	.....	.....
Do.....	8 ¹ / ₂	43	5	48	.....	.....	11	5	25	.....	7	.....	.....	.....
Do.....	8	201	10	211	3	3	34	5	50	2	87	.....	24	.....
Do.....	7 ¹ / ₂	4	.....	4	.....	.....	3	.....	1	.....	.....	.....	.....	.....
Do.....	7	50	.....	50	.....	.....	15	.....	13	.....	15	.....	6	.....
Do.....	6 ¹ / ₂	.....	2	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Do.....	6 ¹ / ₄	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Do.....	6	2	.....	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Do.....	5 ³ / ₄	2	.....	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	4	2	.....	2	a	2	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		380	37	417	b	12	5	84	22	97	10	137	.....	44
Monitors.....	10	.....	77	77	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	9	2	40	42	.....	.....	.....	.....	.....	.....	.....	1	.....	3
Do.....	8 ¹ / ₂	.....	22	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
Do.....	8	2	53	55	.....	.....	.....	.....	1	1	2	.....	.....	16
Do.....	7	.....	5	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Do.....	6 ¹ / ₂	.....	3	3	.....	.....	.....	.....	.....	.....	1	.....	.....	2
Do.....	6	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Total.....		4	201	205	.....	.....	.....	.....	.....	1	1	4	.....	32
Operators.....	14	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	13	.....	10	10	.....	.....	.....	2	.....	4	.....	4	.....	.....
Do.....	12	14	1	15	a	1	.....	.....	.....	1	.....	3	.....	.....
Do.....	11 ¹ / ₂	29	.....	29	.....	.....	.....	.....	.....	.....	.....	7	.....	.....
Do.....	11	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	5	2,463	2,468	.....	.....	1	13	.....	114	1	282	.....	751
Do.....	9 ¹ / ₂	.....	8	8	.....	.....	.....	.....	.....	6	.....	2	.....	.....
Do.....	9	23	3,276	3,299	1	b	9	3	112	1	490	3	898	2
Do.....	8 ³ / ₄	.....	702	702	.....	.....	.....	.....	.....	16	.....	136	.....	263
Do.....	8 ¹ / ₂	5	2,789	2,794	.....	.....	.....	10	.....	116	1	457	2	915
Do.....	8	36	4,616	4,652	c	8	d	76	7	416	9	707	2	1,030
Do.....	7 ³ / ₄	.....	13	13	.....	.....	.....	1	.....	5	.....	6	.....	1
Do.....	7 ¹ / ₂	.....	5	5	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Do.....	7	1	119	120	.....	.....	.....	16	.....	1	1	15	.....	61
Do.....	6 ¹ / ₂	.....	5	5	.....	.....	.....	.....	.....	.....	.....	2	.....	3
Do.....	6 ¹ / ₄	.....	23	23	.....	.....	.....	.....	.....	.....	.....	3	.....	12
Do.....	6 ¹ / ₂	2	366	368	.....	2	.....	42	.....	21	1	263	1	22
Do.....	6	9	233	242	.....	.....	.....	14	4	121	4	90	.....	4
Do.....	5 ³ / ₄	.....	6	6	.....	.....	.....	.....	.....	6	.....	3	.....	.....
Do.....	5 ¹ / ₂	2	152	154	.....	.....	.....	1	.....	6	.....	44	2	57
Do.....	5 ¹ / ₄	.....	9	9	.....	.....	.....	.....	.....	3	.....	4	.....	1
Do.....	5	.....	1	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Do.....	4 ¹ / ₂	.....	1,226	1,226	.....	5	.....	129	.....	545	.....	273	.....	229
Do.....	4	.....	30	30	.....	14	.....	15	.....	1	.....	.....	.....	.....
Do.....	4	.....	10	10	.....	7	.....	1	.....	2	.....	.....	.....	.....
Do.....	3 ¹ / ₂	.....	2	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	(e)	1	63	64	.....	3	.....	6	.....	18	1	15	.....	18
Total.....		128	16,129	16,257	e	9	119	11	778	14	2,180	15	3,642	20
Operators, chief.....	12	12	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	11 ¹ / ₂	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	11	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	10	1	70	71	.....	.....	.....	.....	.....	.....	.....	1	.....	5
Do.....	9	10	162	172	.....	.....	.....	.....	.....	.....	14	.....	26	.....
Do.....	8 ³ / ₄	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	8 ¹ / ₂	.....	106	106	.....	.....	.....	.....	.....	.....	.....	1	.....	3
Do.....	8	3	152	155	.....	.....	.....	1	.....	.....	.....	.....	9	13
Do.....	7 ¹ / ₂	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Under \$10.

b Including 1 under \$10.

c Including 2 under \$10.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1																			
1																			
1																			
1		2																	
1																			
4		2																	
	15		47		13		1												
	10		21		5	2													
	5		8		1		2												
	7		16	1	1		6		4										
	1		1																
	38		93	1	20	2	9		4										
							1												
3		5		1		1													
3		16				3													
		1																	
1	670		577	1	56	1													
6	444	3	120		26	4	3												
	119		168																
1	754		505	1	26		6												
	747	4	303		160	3	25		3		3		1		1				
	16		3																
			6		1		2		1										
	7		1																
	10		6																
1	4																		
	29		16																
	36		8				1												
	2				1														
15	2,838	29	1,713	3	270	12	38		4		3		1		1				
		2				4		6											
		2		1		6													
	3		10		8					14		9		4				1	
1	21	1	31	2	19	2	11	17	1	8	1	11	1	4		4	10	1	1
										3		2		1					
										22		9		5					
	14		15		7		29			24		16		1				1	
	15		21		15		33			1						2	1		
	1																		

d Including 15 under \$10.

e Not reported.

f Including 17 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Operators, chief.....	7½		1	1										
Do.....	7		2	2										1
Do.....	6½		7	7										3
Do.....	6		5	5					1					
Do.....	5½	3		3										
Do.....	5		30	30							1			1
Do.....	4½		1	1							1			
Do.....	4		1	1										1
Do.....	(a)		1	1										
Total.....		38	548	586			1			1		27		55
Operators, chief, assistant..	10		9	9										1
Do.....	9½		1	1										
Do.....	9	1	79	80					1		13			5
Do.....	8½		3	3										
Do.....	8½		6	6										
Do.....	8		39	39							2			
Do.....	6		1	1										
Do.....	5½		1	1										
Do.....	5		1	1										
Total.....		1	140	141					1		15			6
Operators, senior.....	10		95	95										
Do.....	9		79	79							3			18
Do.....	8½		27	27							1			4
Do.....	8		20	20							1			14
Do.....	7		8	8							1			
Do.....	6½		2	2										2
Do.....	6		1	1										1
Total.....			232	232							5			39
Operators, student.....	10		35	35						34		1		
Do.....	9	10	26	36	b 3		23			3			1	
Do.....	8½		30	30			1			3				
Do.....	8	10	380	390	c 9	9	124			159		82		4
Do.....	7		186	186	b 11		175							
Do.....	5		30	30			30							
Total.....		20	687	707	d 79	9	323			196	3	83	1	4
Painters.....	10		1	1										
Do.....	9		6	6										
Do.....	8½		2	2										
Do.....	8		15	15										
Total.....			24	24										
Paymasters.....	8½		5	5										
Do.....	8		1	1										
Do.....	7		1	1										
Total.....			7	7										
Paymasters, assistant.....	8		2	2										
Do.....	7		5	5										
Total.....			7	7										

a Not reported.

b Under \$10.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Number of employees whose monthly rates were—

\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	2	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	3	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	6	.....	3	.....	.....	.....	10	.....	3	.....	8	.....	1	.....	.....	.....	.....	.....	.....
.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1	64	5	83	3	50	12	100	10	83	3	48	2	18	.....	16	1	3	.....	.....
.....	.....	.....	1	.....	.....	.....	.....	.....	6	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
.....	10	.....	6	.....	3	1	9	.....	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	7	.....	1	.....	5	.....	8	.....	3	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	5	.....	.....	.....	.....	.....	8	.....	4	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	19	.....	14	.....	9	1	18	.....	51	.....	7	.....	.....	.....	.....	.....	.....	.....	.....
.....
.....	1	.....	9	.....	78	.....	6	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	22	.....	23	.....	12	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	1	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	3	.....	4	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
.....	46	.....	36	.....	96	.....	8	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
5	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	1	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
5	1	1	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
.....	.....	.....	.....	.....	1	.....	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	1	.....	.....	.....	1	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2	.....	.....	.....	.....	.....	.....	4	.....	.....	2	.....	1	.....	.....	.....	5	.....	1	.....
.....
2	.....	.....	.....	2	.....	7	.....	3	.....	3	.....	1	.....	.....	.....	5	.....	1	.....
.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	1	.....	1	.....	1	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
.....
.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	1	.....	1	.....	3	.....
.....
.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....
.....
.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	1	.....	4	.....	.....	.....

c Including 1 under \$10.

d Including 15 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Photographers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Porters.....	10	4	.....	4	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Do.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		5	.....	5	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Repair men.....	13	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	5	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	311	.....	311	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	361	.....	361	.....	.....	.....	.....	.....	.....	.....	.....	6	.....
Do.....	7	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Total.....		679	.....	679	.....	.....	1	.....	.....	.....	.....	.....	6	.....
Roofers.....	8	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Secretaries, assistant.....	8	1	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		2	1	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Servers.....	9	.....	4	4	.....	.....	.....	.....	.....	.....	.....	3	.....	1
Solicitors.....	9	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	105	.....	105	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		114	.....	114	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stationers.....	8	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stenographers.....	10	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	.....	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	a 19	a 67	93	.....	.....	.....	.....	.....	.....	.....	2	.....	3
Do.....	8½	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	33	241	274	.....	.....	.....	.....	.....	.....	1	3	.....	9
Do.....	7½	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Do.....	7	5	58	63	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Total.....		a 57	a 377	441	.....	.....	.....	.....	.....	.....	1	5	.....	18
Stock keepers.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	19	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Do.....	8	31	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	(b)	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		57	.....	57	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Students.....	8½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Superintendents.....	10	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	28	1	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7½	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		41	1	42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Not including 7, sex not reported.

b Not reported.

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN OF THE COMPANIES—Continued.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
												1							
		1				1													
		1																	
		2				1													
						1		2		2									
						1		1		1									
2		1		3		27		85		188		7							
		4		3		42		53		85		69		94		3			
2		5		6		71		140		275		76		94		3			
										4									
									1									1	
																		1	
									1									2	
		2				2		2		1		2							
						13		51		23		13		1		4			
		2				15		53		24		15		1		4			
										1									
		2		1					1										
	2	1	11		4	3	30	4	14	7	1	3				1			
1	23	4	23	6	27	6	62	8	62	5	26		3	2	2				1
		1		7		1		6		12	1	15		10	1	3	3		
1	28	5	43	6	34	9	99	12	89	13	42	3	13	3	5	4			1
1		1		1		10		3		2									
2						4		9		8		5		3					
				4		1		1											
3		1		5		16		13		10		5		3					
						1													
3																			
3						1													
										1		1				2		1	
																		4	
						1						1				3		24	
																		1	
																		2	
										1		1	1	1		5		32	

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Superintendents, assistant..	8	2		2										
Supervisors.....	10		122	122										7
Do.....	9 $\frac{1}{2}$		1	1										
Do.....	9	3	378	381					3		13			19
Do.....	8 $\frac{1}{2}$		64	64										
Do.....	8 $\frac{1}{2}$	1	408	409										2
Do.....	8 $\frac{1}{2}$		7	7										
Do.....	8 $\frac{1}{2}$		7	7										
Do.....	8	15	413	428					3		9			23
Do.....	7		7	7										
Do.....	6 $\frac{3}{4}$		2	2										
Do.....	6 $\frac{1}{2}$		2	2							1			
Do.....	6		11	11										
Do.....	5 $\frac{3}{4}$		19	19										
Do.....	5		194	194					1		2			4
Total.....		19	1,628	1,647					7		25			55
Supervisors, building.....	9	3		3										
Do.....	8	1		1										
Total.....		4		4										
Supervisors, chief.....	9		4	4										
Do.....	8		10	10										
Do.....	5		2	2										
Total.....			16	16										
Surveyors.....	10	1		1										
Do.....	8	2		2										
Total.....		3		3										
Switchboard men.....	10	30		30										
Do.....	9	44		44									1	
Do.....	8	287		287							1			
Total.....		361		361							1		1	
Switchboard men, apprentice.....	8	67		67										
Switchboard men, helper.....	9	6		6										
Do.....	8	14		14										
Total.....		20		20										
Switchboard men, junior.....	8	15		15										
Telegraph operators.....	8 $\frac{1}{2}$	4	3	7										
Do.....	8	8	10	18							1			1
Do.....	6 $\frac{1}{2}$		1	1										1
Total.....		12	14	26								1		2
Terminal men.....	8	11		11										
Testers.....	10	16		16										
Do.....	9	55		55									1	
Do.....	8 $\frac{1}{2}$	1		1										
Do.....	8	150	4	154							1	1		
Do.....	7 $\frac{1}{2}$	4	4	8										
Do.....	(a)	1		1										
Total.....		227	8	235							1	1	1	

(a) Not reported.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

Number of employees whose monthly rates were—																			
\$35 and under \$40.		\$40 and under \$45.		\$45 and under \$50.		\$50 and under \$60.		\$60 and under \$70.		\$70 and under \$80.		\$80 and under \$90.		\$90 and under \$100.		\$100 and under \$125.		\$125 and over.	
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
															1		1		
	5		24		33		25		28										
	93		52		15	2	77		106			1							
	16		39		8		54		13		1			1	1		1		
	59		120		93		6		28		1			3		5		7	
	2		4		1		77												
							2												
	5		1		4		1												
			3		6		10												
	21		35		52		79												
	201		282		275	2	604		175		2	1		4	1	5	1	7	
																3		1	
																3		1	
	1				2		1												
			1		10		1												
	1		1		13		1												
					1														
					1										1				
					2										1				
6		1		6		5		7		8		3							
3		5		2		12		10		6		3							
				3		65		72		63		22		46		7			
9		10		11		82		89		77		28		46		7			
						3		20		35		8		1					
1				2		3		2		4									
1						7													
2				2		10		2		4									
								1						14					
								3	3	1									
				1	1	2	3	2	1	2	2	2		1		1			
				1	1	2	3	3	5	2	2	2		1		1			
								1		3		3		3		1			
								5		6		2							
				1		10		15		24		2		2					
3		9		4	3	22		30		1		25		25		3			
2	1	1	2		1														

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Testers, chief.....	9	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	19	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		21	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Traffic chiefs.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	27	.....	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	22	.....	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	6	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		53	.....	53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Traffic chiefs, assistant.....	8½	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Treasurers, assistant.....	8	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	7	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		3	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trouble men.....	10	15	.....	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	55	.....	55	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Do.....	8	207	.....	207	1	.....	.....	.....	.....	.....	.....	.....	4	.....
Total.....		277	.....	277	1	.....	.....	.....	.....	.....	.....	.....	5	.....
Trouble men, junior.....	8	17	.....	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tile layers.....	10	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waitresses.....	10	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Do.....	9	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Do.....	8½	.....	1	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Do.....	8	.....	11	11	.....	1	.....	1	.....	.....	.....	.....	6	.....
Do.....	7	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Do.....	6	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		.....	25	25	.....	1	.....	1	.....	.....	.....	.....	.....	11
Watchmen.....	15	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	12	12	.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	10	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	6	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	45	.....	45	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Do.....	3	2	.....	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....
Total.....		71	.....	71	.....	.....	2	.....	.....	.....	.....	.....	1	.....
Wire chiefs.....	10	18	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	145	.....	145	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8½	2	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	152	1	153	a 2	.....	.....	.....	2	.....	1	.....	.....	.....
Do.....	7	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		318	1	319	a 2	.....	.....	.....	2	.....	1	.....	.....	.....
Wire chiefs, assistant.....	10	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	9	8	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do.....	8	16	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....		25	.....	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

a Including 1 under \$10.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

BELL TELEPHONE SYSTEM—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Wiremen.....	10	2		2										
Do.....	9	1		1										
Do.....	8½	1		1										
Do.....	8	122		122									1	
Do.....	7	1		1										
Total.....		127		127									1	
Wiremen, apprentice.....	8	8		8										
Miscellaneous.....	12	3		3										
Do.....	10	17		17										
Do.....	9	45	3	48			1			3				
Do.....	8½	4		4										
Do.....	8	176	4	180					2		3	1	13	
Do.....	5	1		1						1				
Do.....	(a)	2		2										
Total.....		247	8	255			1		2	4	3	1	13	
Grand total.....		b15,326	b22,434	37,797	c44	d240	126	1,156	156	2,505	279	4,145	296	5,156

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

Clerks.....	10		8	8										
Do.....	9	1	13	14									1	
Do.....	8½		7	7								1	1	
Do.....	8	7	29	36							1	1		4
Do.....	7	1	6	7										
Do.....	6½		1	1										
Do.....	6		4	4										
Total.....		9	68	77							1	2		6
Clerks, chief.....	9		1	1										
Do.....	8½	2		2										
Do.....	8	2	2	4										
Total.....		4	3	7										
Examiners.....	9		1	1										
Do.....	6		1	1										
Total.....			2	2										
Inspectors.....	9	2		2										
Do.....	8½	1		1										
Do.....	8	5	1	6										
Do.....	7		1	1										
Total.....		8	2	10										
Instructors.....	9		3	3										
Do.....	8½		1	1										
Do.....	8		1	1										
Total.....			5	5										

a Not reported.

b Not including 37, sex not reported.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Continued.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Matrons.....	9		2	2										
Do.....	8		3	3										2
Do.....	7		1	1										
Do.....	5		1	1								1		
Total.....			7	7								1		2
Messengers.....	10		1	1				1		1				
Do.....	9½		1	1			1							
Do.....	9		1	1				1						
Do.....	8½		2	2			1	2	1					
Do.....	8		2	2			1		1					
Do.....	6		2	2				2						
Total.....			5	6			3	6	2					
Monitors.....	9		1	1										
Do.....	6		1	1										
Total.....			2	2										
Operators.....	10		126	126								12		7
Do.....	9½		2	2										
Do.....	9		234	234						5		67		47
Do.....	8½		8	8								3		3
Do.....	8		12	12								6		4
Do.....	7½		3	3								1		
Do.....	7		45	45					1			8		11
Do.....	6½		33	33								7		7
Do.....	6		50	50								19		8
Total.....			513	513						6		123		87
Operators, chief.....	9½		1	1										
Do.....	9		3	3										
Do.....	8½		2	2										
Do.....	8		6	6										
Do.....	7½		1	1										
Do.....	6		3	3										
Total.....			16	16										
Operators, chief, assistant.....	9		4	4										
Do.....	8½		2	2										
Do.....	8		1	1										
Do.....	7		1	1										
Do.....	6		1	1										
Total.....			1	12										
Stenographers.....	8½		3	3										
Do.....	8		6	6										
Total.....			9	9										
Supervisors.....	9		44	44										
Do.....	8½		5	5										
Do.....	8		10	10										
Do.....	7		3	3										
Do.....	6½		2	2										
Do.....	6		15	15										
Total.....			79	79										

CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN
OF THE COMPANIES—Continued.

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Continued.

[illegible]

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Continued.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Telegraph operators.....	8		4	4										
Traffic chiefs.....	9		1	1										
Do.....	8½	1		1										
Do.....	8	5		5										
Do.....	7	2		2										
Total.....		8	1	9										
Traffic chiefs, assistant.....	9	1		1										
Do.....	8½	1		1										
Do.....	8	2		2										
Total.....		4		4										
Grand total.....		39	729	768			3	6	2	6	1	126		95

INDEPENDENT TELEPHONE COMPANIES.

Agents.....	8½	1		1										
Bookkeepers.....	8½	3		3										
Cable splicers.....	9	6		6										
Carpenters.....	9	1		1										
Cashiers.....	8½		1	1										
Clerks.....	9½		2	2					1		1			
Do.....	9	3	5	8					1	2			3	
Do.....	8½	10	8	18									4	
Do.....	8	6	6	6							1		4	
Do.....	5		3	3			1				2			
Total.....		13	24	37			1		2	2	4		11	
Clerks, chief.....	8½	2		2										
Collectors.....	8½	16		16										
Draftsmen.....	8½	1		1										
Drivers.....	9	2		2										
Foremen.....	9	11		11										
Do.....	8	2		2										
Total.....		13		13										
Foremen, general.....	8½	1		1										
Inspectors.....	9	1		1										
Do.....	8	1		1										
Total.....		2		2										
Installers.....	9	7		7										
Instructors.....	8		1	1										1
Janitors.....	9	1		1									1	
Do.....	8½	10		10									2	
Total.....		11		11									3	
Laborers.....	9	16		16										
Linemen.....	9	43		43									1	
Matrons.....	9½		1	1					1					
Do.....	8		2	2										2
Total.....			3	3					1					2

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN 1908, AS REPORTED BY OFFICIALS

B.—SUMMARY, FOR TELEPHONE SYSTEMS, OF CLASSIFIED RATES OF WAGES, AND HOURS OF LABOR, BY OCCUPATIONS—Concluded.

INDEPENDENT TELEPHONE COMPANIES—Concluded.

Occupation.	Hours per regular full day.	Number of employees.			Number of employees whose monthly rates were—									
					Under \$15.		\$15 and under \$20.		\$20 and under \$25.		\$25 and under \$30.		\$30 and under \$35.	
		M.	F.	Total.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Messengers.....	8½	3		3			2		1					
Do.....	8		2	2							1			1
Total.....		3	2	5			2		1		1			1
Monitors.....	9½		1	1			1							
Do.....	9		1	1										1
Total.....			2	2			1							1
Operators.....	10		1	1							1			
Do.....	9½	1	53	54	1		1		14		35			1
Do.....	9		87	87			18		32		37			
Do.....	8		373	373			1		115		198			59
Do.....	7		15	15			15							
Do.....	5		38	38		38								
Total.....		1	567	568	1	38		35	161		271			60
Operators, chief.....	9½		1	1							1			
Do.....	9		5	5					1		1			
Do.....	8	1	18	19							3		4	
Do.....	5		1	1									1	
Total.....		1	25	26					1		5			5
Operators, chief, assistant...	9		1	1										
Do.....	8		5	5							1			1
Total.....			6	6							1			1
Operators, senior.....	8		33	33							1			32
Operators, student.....	9		1	1		a1								
Repair men.....	9	15		15										
Do.....	8	1		1										
Total.....		16		16										
Solicitors.....	8½	3		3										
Stenographers.....	8½	1	3	4										
Stock keepers.....	9	1		1										
Do.....	8½	1		1										
Total.....		2		2										
Superintendents.....	8½	3		3										
Supervisors.....	9		9	9										4
Do.....	8		53	53					2		9		27	
Do.....	5		3	3							2		1	
Total.....			65	65					2		11			32
Switchboard men.....	9	3		3										
Wire chiefs.....	9	6		6										
Wiremen.....	9	3		3										
Miscellaneous.....	9	17		17							1		3	
Do.....	(c)	1	1	2	1	a1								
Total.....		18	1	19	1	a1					1		3	
Grand total.....		198	734	932	2	b40	2	37	1	167	3	294	7	146

a Under \$10.

b Including 2 under \$10.

c Not reported.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES.

BELL TELEPHONE SYSTEM.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
BELL TELEPHONE CO. OF MISSOURI, ST. LOUIS, MO.							
Under \$10.....							
\$10 and under \$15.....	1			1	100.00		
\$15 and under \$20.....	9	3	33.33	6	66.67		
\$20 and under \$25.....	120	44	36.67	56	46.67	20	16.67
\$25 and under \$30.....	189	72	38.10	97	51.32	20	10.58
\$30 and under \$35.....	142	52	36.62	79	55.63	11	7.75
\$35 and under \$40.....	114	42	36.84	66	57.89	6	5.26
\$40 and under \$45.....	87	34	39.08	49	56.32	4	4.60
\$45 and under \$50.....	87	28	32.18	52	59.77	7	8.05
\$50 and under \$60.....	165	54	32.73	94	56.97	17	10.30
\$60 and under \$70.....	115	17	14.78	67	58.26	31	26.96
\$70 and under \$80.....	119	46	38.66	58	48.74	15	12.61
\$80 and under \$90.....	66	14	21.21	35	53.03	17	25.76
\$90 and under \$100.....	50	24	48.00	18	36.00	8	16.00
\$100 and under \$125.....	21	1	4.76	19	90.48	1	4.76
\$125 and over.....	12			12	100.00		
Total.....	1,297	431	33.23	709	54.66	157	12.10
BELL TELEPHONE CO. OF PENNSYLVANIA, PHILADELPHIA, PA.							
Under \$10.....							
\$10 and under \$15.....	5	1	20.00	4	80.00		
\$15 and under \$20.....	2			1	50.00	1	50.00
\$20 and under \$25.....	59	10	16.95	27	45.76	22	37.29
\$25 and under \$30.....	272	42	15.44	99	36.40	131	48.16
\$30 and under \$35.....	324	44	13.58	131	40.43	149	45.99
\$35 and under \$40.....	240	30	12.50	133	55.42	77	32.08
\$40 and under \$45.....	95			95	100.00		
\$45 and under \$50.....	69			69	100.00		
\$50 and under \$60.....	8			8	100.00		
\$60 and under \$70.....	11			11	100.00		
\$70 and under \$80.....	7			7	100.00		
\$80 and under \$90.....							
\$90 and under \$100.....	1			1	100.00		
\$100 and under \$125.....							
\$125 and over.....							
Total.....	1,093	127	11.62	586	53.61	380	34.77
CENTRAL DISTRICT AND PRINTING TELEGRAPH CO., PITTSBURG, PA.							
Under \$10.....	8			7	87.50	1	12.50
\$10 and under \$15.....	33	2	6.06	29	87.88	2	6.06
\$15 and under \$20.....	42	2	4.76	16	38.10	24	57.14
\$20 and under \$25.....	86	14	16.28	37	43.02	35	40.70
\$25 and under \$30.....	361	59	16.34	171	47.37	131	36.29
\$30 and under \$35.....	168	22	13.10	107	63.69	39	23.21
\$35 and under \$40.....	101	14	13.86	52	51.49	35	34.65
\$40 and under \$45.....	66	2	3.03	47	71.21	17	25.76
\$45 and under \$50.....	43	2	4.65	37	86.05	4	9.30
\$50 and under \$60.....	139	19	13.67	106	76.26	14	10.07
\$60 and under \$70.....	165	10	6.06	136	82.42	19	11.52
\$70 and under \$80.....	213	20	9.39	165	77.46	28	13.15
\$80 and under \$90.....	58	1	1.72	56	96.55	1	1.72
\$90 and under \$100.....	52	7	13.46	43	82.69	2	3.85
\$100 and under \$125.....	50			50	100.00		
\$125 and over.....	39			39	100.00		
Total.....	1,624	174	10.71	1,098	67.61	352	21.67

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
CENTRAL UNION TELEPHONE CO., INDIANAPOLIS, IND.							
Under \$10.....							
\$10 and under \$15.....	3	1	33.33	2	66.67		
\$15 and under \$20.....	22	11	50.00	9	40.91	2	9.09
\$20 and under \$25.....	82	24	29.27	53	64.63	5	6.10
\$25 and under \$30.....	79	29	36.71	45	56.96	5	6.33
\$30 and under \$35.....	38	17	44.74	14	36.84	7	18.42
\$35 and under \$40.....	27	10	37.04	15	55.56	2	7.41
\$40 and under \$45.....	21	7	33.33	12	57.14	2	9.52
\$45 and under \$50.....	24	4	16.67	19	79.17	1	4.17
\$50 and under \$60.....	32	3	9.38	27	84.38	2	6.25
\$60 and under \$70.....	31	3	9.68	25	80.65	3	9.68
\$70 and under \$80.....	21	1	4.76	18	85.71	2	9.52
\$80 and under \$90.....	6			6	100.00		
\$90 and under \$100.....	3			1	33.33	2	66.67
\$100 and under \$125.....							
\$125 and over.....							
Total.....	389	110	28.28	246	63.24	33	8.48
CHESAPEAKE AND POTOMAC TELEPHONE CO., BALTIMORE, MD.							
Under \$10.....							
\$10 and under \$15.....	8			8	100.00		
\$15 and under \$20.....	31			28	90.33	3	9.68
\$20 and under \$25.....	34			33	97.06	1	2.94
\$25 and under \$30.....	73	3	4.11	64	87.63	6	8.22
\$30 and under \$35.....	263	10	3.80	220	83.65	33	12.55
\$35 and under \$40.....	15			14	93.33	1	6.67
\$40 and under \$45.....	20	1	5.00	18	90.00	1	5.00
\$45 and under \$50.....	6			5	83.33	1	16.67
\$50 and under \$60.....	5			5	100.00		
\$60 and under \$70.....							
\$70 and under \$80.....	3			3	100.00		
\$80 and under \$90.....	1			1	100.00		
\$90 and under \$100.....	2			1	50.00	1	50.00
\$100 and under \$125.....	1			1	100.00		
\$125 and over.....	2			2	100.00		
Total.....	464	14	3.01	403	86.85	47	10.13
CHESAPEAKE AND POTOMAC TELEPHONE CO., WASHINGTON, D. C.							
Under \$10.....							
\$10 and under \$15.....	1			1	100.00		
\$15 and under \$20.....	61	5	8.20	53	86.89	3	4.92
\$20 and under \$25.....	48	3	6.25	44	91.67	1	2.08
\$25 and under \$30.....	41	1	2.44	38	92.68	2	4.88
\$30 and under \$35.....	162	30	18.52	126	77.78	6	3.70
\$35 and under \$40.....	12	2	16.67	10	83.33		
\$40 and under \$45.....	18			17	94.44	1	5.56
\$45 and under \$50.....	4			4	100.00		
\$50 and under \$60.....	2			2	100.00		
\$60 and under \$70.....	3			3	100.00		
\$70 and under \$80.....	3			3	100.00		
\$80 and under \$90.....	1			1	100.00		
\$90 and under \$100.....	2			2	100.00		
\$100 and under \$125.....							
\$125 and over.....	1			1	100.00		
Total.....	359	41	11.42	305	84.96	13	3.62

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
CHICAGO TELEPHONE CO., CHICAGO, ILL.							
Under \$10.....	4			4	100.00		
\$10 and under \$15.....	9	1	11.11	6	66.67	2	22.22
\$15 and under \$20.....	325	233	71.69	21	6.46	71	21.85
\$20 and under \$25.....	770	318	41.30	92	11.95	360	46.75
\$25 and under \$30.....	549	161	29.33	60	10.93	328	59.74
\$30 and under \$35.....	917	422	46.02	106	11.56	389	42.42
\$35 and under \$40.....	865	388	44.86	116	13.41	361	41.73
\$40 and under \$45.....	643	311	48.37	112	17.42	220	34.21
\$45 and under \$50.....	442	180	40.72	142	32.13	120	27.15
\$50 and under \$60.....	1,301	413	31.74	506	38.89	382	29.36
\$60 and under \$70.....	638	116	18.18	349	54.70	173	27.12
\$70 and under \$80.....	670	136	20.30	339	50.60	195	29.10
\$80 and under \$90.....	425	115	27.06	184	43.29	126	29.65
\$90 and under \$100.....	195	20	10.26	107	54.87	68	34.87
\$100 and under \$125.....	188	6	3.19	148	78.72	34	18.09
\$125 and over.....	55	1	1.82	51	92.73	3	5.45
Total.....	a 7,996	b 2,821	35.28	2,343	29.30	2,832	35.42
CINCINNATI AND SUBURBAN BELL TELEPHONE CO., CINCINNATI, OHIO.							
Under \$10.....	5			5	100.00		
\$10 and under \$15.....							
\$15 and under \$20.....	39	12	30.77	3	7.69	24	61.54
\$20 and under \$25.....	38	10	26.32	12	31.58	16	42.11
\$25 and under \$30.....	245	103	42.04	22	8.98	120	48.98
\$30 and under \$35.....	299	162	54.18	39	13.04	98	32.78
\$35 and under \$40.....	97	53	54.64	35	36.08	9	9.28
\$40 and under \$45.....	46	10	21.74	34	73.91	2	4.35
\$45 and under \$50.....	97	49	50.52	37	38.14	11	11.34
\$50 and under \$60.....	126	46	36.51	56	44.44	24	19.05
\$60 and under \$70.....	120	27	22.50	65	54.17	28	23.33
\$70 and under \$80.....	81	31	38.27	44	54.32	6	7.41
\$80 and under \$90.....	18	2	11.11	14	77.78	2	11.11
\$90 and under \$100.....	21	7	33.33	12	57.14	2	9.52
\$100 and under \$125.....	5			5	100.00		
\$125 and over.....	1			1	100.00		
Total.....	1,238	512	41.36	384	31.02	342	27.63
CITIZENS TELEPHONE CO., COVINGTON, KY.							
Under \$10.....	3			3	100.00		
\$10 and under \$15.....	1			1	100.00		
\$15 and under \$20.....	3			3	100.00		
\$20 and under \$25.....	5			4	80.00	1	20.00
\$25 and under \$30.....	28	26	92.86	1	3.57	1	3.57
\$30 and under \$35.....	31	16	51.61	2	6.45	13	41.94
\$35 and under \$40.....	7	2	28.57	1	14.29	4	57.14
\$40 and under \$45.....	1			1	100.00		
\$45 and under \$50.....							
\$50 and under \$60.....	3			2	66.67	1	33.33
\$60 and under \$70.....							
\$70 and under \$80.....							
\$80 and under \$90.....	1			1	100.00		
\$90 and under \$100.....							
\$100 and under \$125.....							
\$125 and over.....							
Total.....	83	44	53.01	19	22.89	20	24.10

a Not including 11 pieceworkers; and also 3, no earnings reported.

b Not including 3, no earnings reported.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
CLEVELAND TELEPHONE CO., CLEVELAND, OHIO.							
Under \$10.....	2			2	100.00		
\$10 and under \$15.....	33	20	60.61	12	36.36	1	3.03
\$15 and under \$20.....	124	21	16.94	12	9.68	91	73.39
\$20 and under \$25.....	158	33	20.89	17	10.76	108	68.35
\$25 and under \$30.....	70	18	25.71	2	2.86	50	71.43
\$30 and under \$35.....	51	12	23.53	13	25.49	26	50.98
\$35 and under \$40.....	47	8	17.02	27	57.45	12	25.53
\$40 and under \$45.....	36	27	75.00	6	16.67	3	8.33
\$45 and under \$50.....	75	13	17.33	31	41.33	31	41.33
\$50 and under \$60.....	73	9	12.33	39	53.42	25	34.25
\$60 and under \$70.....	81	8	9.88	45	55.56	28	34.57
\$70 and under \$80.....	25	1	4.00	20	80.00	4	16.00
\$80 and under \$90.....	10			5	50.00	5	50.00
\$90 and under \$100.....	8			8	100.00		
\$100 and under \$125.....	6			6	100.00		
\$125 and over.....							
Total.....	799	170	21.28	245	30.66	384	48.06
COLORADO TELEPHONE CO., DENVER, COLO.							
Under \$10.....	1			1	100.00		
\$10 and under \$15.....							
\$15 and under \$20.....	1			1	100.00		
\$20 and under \$25.....	17	8	47.06	9	52.94		
\$25 and under \$30.....	79	45	56.96	30	37.97	4	5.06
\$30 and under \$35.....	47	27	57.45	17	36.17	3	6.38
\$35 and under \$40.....	179	119	66.48	50	27.93	10	5.59
\$40 and under \$45.....	93	33	35.48	42	45.16	18	19.35
\$45 and under \$50.....	34	12	35.29	18	52.94	4	11.76
\$50 and under \$60.....	66	8	12.12	51	77.27	7	10.61
\$60 and under \$70.....	43			31	72.09	12	27.91
\$70 and under \$80.....	78	19	24.36	41	52.56	18	23.08
\$80 and under \$90.....	58	6	10.34	34	58.62	18	31.03
\$90 and under \$100.....	19	2	10.53	16	84.21	1	5.26
\$100 and under \$125.....	20	1	5.00	19	95.00		
\$125 and over.....	11			11	100.00		
Total.....	746	280	37.53	371	49.73	95	12.73
CUMBERLAND TELEPHONE AND TELEGRAPH CO., LOUISVILLE, KY.							
Under \$10.....	3			3	100.00		
\$10 and under \$15.....	14	1	7.14			13	92.86
\$15 and under \$20.....	24	5	20.83	1	4.17	18	75.00
\$20 and under \$25.....	21	2	9.52	6	28.57	13	61.90
\$25 and under \$30.....	52	19	36.54	3	5.77	30	57.69
\$30 and under \$35.....	22	7	31.82	6	27.27	9	40.91
\$35 and under \$40.....	21	1	4.76	14	66.67	6	28.57
\$40 and under \$45.....	8			7	87.50	1	12.50
\$45 and under \$50.....	14			11	78.57	3	21.43
\$50 and under \$60.....	32	3	9.38	24	75.00	5	15.63
\$60 and under \$70.....	38	1	2.63	26	68.42	11	28.95
\$70 and under \$80.....	13	1	7.69	11	84.62	1	7.69
\$80 and under \$90.....	4	1	25.00	3	75.00		
\$90 and under \$100.....	2			2	100.00		
\$100 and under \$125.....	1			1	100.00		
\$125 and over.....	3			3	100.00		
Total.....	272	41	15.07	121	44.49	110	40.44

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS, AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
CUMBERLAND TELEPHONE AND TELEGRAPH CO., NASHVILLE, TENN.							
Under \$10.....	2					2	100.00
\$10 and under \$15.....	13					13	100.00
\$15 and under \$20.....	33	4	12.12	3	9.09	26	78.79
\$20 and under \$25.....	27	6	22.22	3	11.11	18	66.67
\$25 and under \$30.....	109	30	27.52	6	5.50	73	66.97
\$30 and under \$35.....	7			2	28.57	5	71.43
\$35 and under \$40.....	12	2	16.67	8	66.67	2	16.67
\$40 and under \$45.....	7	1	14.29	3	42.86	3	42.86
\$45 and under \$50.....	13			10	76.92	3	23.08
\$50 and under \$60.....	33	7	21.21	17	51.52	9	27.27
\$60 and under \$70.....	15	1	6.67	14	93.33		
\$70 and under \$80.....	15	2	13.33	13	86.67		
\$80 and under \$90.....	5			5	100.00		
\$90 and under \$100.....							
\$100 and under \$125.....	1			1	100.00		
\$125 and over.....	1			1	100.00		
Total.....	293	53	18.09	86	29.35	154	52.56
CUMBERLAND TELEPHONE AND TELEGRAPH CO., NEW ORLEANS, LA.							
Under \$10.....							
\$10 and under \$15.....	33	3	9.09	2	6.06	28	84.85
\$15 and under \$20.....	25	1	4.00	6	24.00	18	72.00
\$20 and under \$25.....	49	4	8.16	10	20.41	35	71.43
\$25 and under \$30.....	113	13	11.50	6	5.31	94	83.19
\$30 and under \$35.....	47	5	10.64	9	19.15	33	70.21
\$35 and under \$40.....	48	12	25.00	18	37.50	18	37.50
\$40 and under \$45.....	22			18	81.82	4	18.18
\$45 and under \$50.....	16			9	56.25	7	43.75
\$50 and under \$60.....	28	5	17.86	13	46.43	10	35.71
\$60 and under \$70.....	59	16	27.12	24	40.68	19	32.20
\$70 and under \$80.....	38	2	5.26	23	60.53	13	34.21
\$80 and under \$90.....	19	1	5.26	17	89.47	1	5.26
\$90 and under \$100.....	1			1	100.00		
\$100 and under \$125.....	7			7	100.00		
\$125 and over.....	4			4	100.00		
Total.....	509	62	12.18	167	32.81	280	55.01
MISSOURI AND KANSAS TELEPHONE CO., TOWNS UNDER 5,000 POPULATION.							
Under \$10.....	18	1	5.56	15	83.33	2	11.11
\$10 and under \$15.....	51	3	5.88	42	82.35	6	11.76
\$15 and under \$20.....	142	19	13.38	79	55.63	44	30.99
\$20 and under \$25.....	130	20	15.38	64	49.23	46	35.38
\$25 and under \$30.....	59	6	10.17	32	54.24	21	35.59
\$30 and under \$35.....	27	4	14.81	14	51.85	9	33.33
\$35 and under \$40.....	18	9	50.00	8	44.44	1	5.56
\$40 and under \$45.....	17	2	11.76	15	88.24		
\$45 and under \$50.....	16	6	37.50	5	31.25	5	31.25
\$50 and under \$60.....	56	22	39.29	27	48.21	7	12.50
\$60 and under \$70.....	29	7	24.14	21	72.41	1	3.45
\$70 and under \$80.....	10	1	10.00	9	90.00		
\$80 and under \$90.....	1			1	100.00		
\$90 and under \$100.....	1			1	100.00		
\$100 and under \$125.....	2			2	100.00		
\$125 and over.....	2			2	100.00		
Total.....	579	100	17.27	337	58.20	142	24.53

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
MISSOURI AND KANSAS TELEPHONE CO., TOWNS OF 5,000 AND UNDER 15,000.							
Under \$10.....	8	1	12.50	6	75.00	1	12.50
\$10 and under \$15.....	14	1	7.14	11	78.57	2	14.29
\$15 and under \$20.....	63	14	22.22	46	73.02	3	4.76
\$20 and under \$25.....	124	11	8.87	77	62.10	36	29.03
\$25 and under \$30.....	41	4	9.76	22	53.66	15	36.59
\$30 and under \$35.....	24	5	20.83	9	37.50	10	41.67
\$35 and under \$40.....	22	13	59.09	7	31.82	2	9.09
\$40 and under \$45.....	4	.....	.....	3	75.00	1	25.00
\$45 and under \$50.....	13	4	30.77	7	53.85	2	15.38
\$50 and under \$60.....	35	19	54.29	11	31.43	5	14.29
\$60 and under \$70.....	37	10	27.03	18	48.65	9	24.32
\$70 and under \$80.....	14	2	14.29	8	57.14	4	28.57
\$80 and under \$90.....	7	.....	.....	7	100.00	.....	.....
\$90 and under \$100.....	.....	.....	.....	.....	.....	.....	.....
\$100 and under \$125.....	4	.....	.....	4	100.00	.....	.....
\$125 and over.....	3	.....	.....	3	100.00	.....	.....
Total.....	413	84	20.34	239	57.87	90	21.79
MISSOURI AND KANSAS TELEPHONE CO., TOWNS 15,000 AND UNDER 25,000.							
Under \$10.....	2	.....	.....	2	100.00	.....	.....
\$10 and under \$15.....	3	.....	.....	1	33.33	2	66.67
\$15 and under \$20.....	21	8	38.10	10	47.62	3	14.29
\$20 and under \$25.....	43	4	9.30	23	53.49	16	37.21
\$25 and under \$30.....	62	11	17.74	26	41.94	25	40.32
\$30 and under \$35.....	17	3	17.65	8	47.06	6	35.29
\$35 and under \$40.....	8	1	12.50	5	62.50	2	25.00
\$40 and under \$45.....	5	.....	.....	5	100.00	.....	.....
\$45 and under \$50.....	11	4	36.36	4	36.36	3	27.27
\$50 and under \$60.....	20	9	45.00	7	35.00	4	20.00
\$60 and under \$70.....	35	15	42.86	17	48.57	3	8.57
\$70 and under \$80.....	10	2	20.00	6	60.00	2	20.00
\$80 and under \$90.....	6	.....	.....	6	100.00	.....	.....
\$90 and under \$100.....	1	.....	.....	1	100.00	.....	.....
\$100 and under \$125.....	.....	.....	.....	.....	.....	.....	.....
\$125 and over.....	3	.....	.....	3	100.00	.....	.....
Total.....	247	57	23.08	124	50.20	66	26.72
MISSOURI AND KANSAS TELEPHONE CO., TOWNS 25,000 AND OVER.							
Under \$10.....	1	.....	.....	1	100.00	.....	.....
\$10 and under \$15.....	4	1	25.00	3	75.00	.....	.....
\$15 and under \$20.....	117	35	29.91	62	52.99	20	17.09
\$20 and under \$25.....	120	28	23.33	74	61.67	18	15.00
\$25 and under \$30.....	174	37	21.26	103	59.20	34	19.54
\$30 and under \$35.....	148	17	11.49	68	45.95	63	42.57
\$35 and under \$40.....	82	26	31.71	34	41.46	22	26.83
\$40 and under \$45.....	106	38	35.85	49	46.23	19	17.92
\$45 and under \$50.....	128	73	57.03	35	27.34	20	15.63
\$50 and under \$60.....	134	38	28.36	76	56.72	20	14.93
\$60 and under \$70.....	168	84	50.00	66	39.29	18	10.71
\$70 and under \$80.....	149	33	22.15	76	51.01	40	26.85
\$80 and under \$90.....	43	2	4.65	39	90.70	2	4.65
\$90 and under \$100.....	16	2	12.50	14	87.50	.....	.....
\$100 and under \$125.....	29	1	3.45	25	86.21	3	10.34
\$125 and over.....	24	.....	.....	24	100.00	.....	.....
Total.....	1,443	415	28.76	749	51.91	279	19.33

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
NEBRASKA TELEPHONE CO., OMAHA, NEBR.							
Under \$10.....							
\$10 and under \$15.....	18	7	38.89	4	22.22	7	38.89
\$15 and under \$20.....	40	8	20.00	4	10.00	28	70.00
\$20 and under \$25.....	58	16	27.59	8	13.79	34	58.62
\$25 and under \$30.....	122	65	53.28	9	7.38	48	39.34
\$30 and under \$35.....	75	25	33.33	15	20.00	35	46.67
\$35 and under \$40.....	43	3	6.98	22	51.16	18	41.86
\$40 and under \$45.....	44	24	54.55	16	36.36	4	9.09
\$45 and under \$50.....	39	5	12.82	25	64.10	9	23.08
\$50 and under \$60.....	39	2	5.13	35	89.74	2	5.13
\$60 and under \$70.....	49	9	18.37	29	59.18	11	22.45
\$70 and under \$80.....	18	2	11.11	16	88.89		
\$80 and under \$90.....	7			5	71.43	2	28.57
\$90 and under \$100.....	5	1	20.00	4	80.00		
\$100 and under \$125.....	6			6	100.00		
\$125 and over.....							
Total.....	563	167	29.66	198	35.17	198	35.17
NEW ENGLAND TELEPHONE AND TELEGRAPH CO., BOSTON, MASS.							
Under \$10.....							
\$10 and under \$15.....	3			3	100.00		
\$15 and under \$20.....	131	24	18.32	107	81.68		
\$20 and under \$25.....	171	15	8.77	154	90.06	2	1.17
\$25 and under \$30.....	439	70	15.95	357	81.32	12	2.73
\$30 and under \$35.....	672	99	14.73	564	83.93	9	1.34
\$35 and under \$40.....	375	42	11.20	327	87.20	6	1.60
\$40 and under \$45.....	460	52	11.30	408	88.70		
\$45 and under \$50.....	111	5	4.50	106	95.50		
\$50 and under \$60.....	372	21	5.65	336	90.32	15	4.03
\$60 and under \$70.....	355	18	5.07	325	91.55	12	3.38
\$70 and under \$80.....	319	22	6.90	260	81.50	37	11.60
\$80 and under \$90.....	106	3	2.83	100	94.34	3	2.83
\$90 and under \$100.....	18	1	5.56	17	94.44		
\$100 and under \$125.....	54			52	96.30	2	3.70
\$125 and over.....	44			44	100.00		
Total.....	3,630	372	10.25	3,160	87.05	98	2.70
NEW YORK TELEPHONE CO., NEW YORK, N. Y.							
Under \$10.....							
\$10 and under \$15.....	8			8	100.00		
\$15 and under \$20.....	51			51	100.00		
\$20 and under \$25.....	164	3	1.83	158	96.34	3	1.83
\$25 and under \$30.....	278	11	3.96	263	94.60	4	1.44
\$30 and under \$35.....	1,266	105	8.29	1,160	91.63	1	.08
\$35 and under \$40.....	1,004	70	6.97	933	92.93	1	.10
\$40 and under \$45.....	1,029	71	6.90	955	92.81	3	.29
\$45 and under \$50.....	341	19	5.57	316	92.67	6	1.76
\$50 and under \$60.....	667	115	17.24	531	79.61	21	3.15
\$60 and under \$70.....	878	36	4.10	799	91.00	43	4.90
\$70 and under \$80.....	679	44	6.48	589	86.75	46	6.77
\$80 and under \$90.....	371	13	3.50	339	91.37	19	5.12
\$90 and under \$100.....	347	19	5.48	302	87.03	26	7.49
\$100 and under \$125.....	259	38	14.67	206	79.54	15	5.79
\$125 and over.....	226	2	.88	224	99.12		
Total.....	7,568	546	7.21	6,834	90.30	188	2.48

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Total em- ploy- ees.	Employees whose earnings during the respec- tive pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earn- ings at speci- fied rates.	
		Num- ber.	Per- cent.	Num- ber.	Per- cent.	Num- ber.	Per- cent.
NORTHWESTERN TELEPHONE EXCHANGE CO., TOWNS UNDER 5,000.							
Under \$10.	1			1	100.00	1	100.00
\$10 and under \$15.	1			6	85.71	1	14.29
\$15 and under \$20.	7			9	69.23	2	15.38
\$20 and under \$25.	13	2	15.38	18	62.07	9	31.03
\$25 and under \$30.	29	2	6.90	5	45.45	5	45.45
\$30 and under \$35.	11	1	9.09	2	66.67		
\$35 and under \$40.	3	1	33.33	4	100.00		
\$40 and under \$45.	4			1	100.00		
\$45 and under \$50.	1			6	85.71	1	14.29
\$50 and under \$60.	7			5	83.33	1	16.67
\$60 and under \$70.	6			12	92.31	1	7.69
\$70 and under \$80.	13						
\$80 and under \$90.							
\$90 and under \$100.							
\$100 and under \$125.							
\$125 and over.							
Total.	96	6	6.25	69	71.88	21	21.88
NORTHWESTERN TELEPHONE EXCHANGE CO., TOWNS 5,000 AND UNDER 15,000.							
Under \$10.	1			1	100.00		
\$10 and under \$15.	19	6	31.58	4	21.05	9	47.37
\$15 and under \$20.	40	2	5.00	21	52.50	17	42.50
\$20 and under \$25.	58	5	8.62	31	53.45	22	37.93
\$25 and under \$30.	45	1	2.22	17	37.78	27	60.00
\$30 and under \$35.	19	1	5.26	13	68.42	5	26.32
\$35 and under \$40.	6			6	100.00		
\$40 and under \$45.	7	3	42.86	2	28.57	2	28.57
\$45 and under \$50.	29	8	27.59	16	55.17	5	17.24
\$50 and under \$60.	25	2	8.00	19	76.00	4	16.00
\$60 and under \$70.	14			13	92.86	1	7.14
\$70 and under \$80.	7			6	85.71	1	14.29
\$80 and under \$90.							
\$90 and under \$100.							
\$100 and under \$125.	6	1	16.67	5	83.33		
\$125 and over.							
Total.	276	29	10.51	154	55.80	93	33.70
NORTHWESTERN TELEPHONE EXCHANGE CO., TOWNS 15,000 AND UNDER 25,000.							
Under \$10.							
\$10 and under \$15.	6			6	100.00		
\$15 and under \$20.	8			7	87.50	1	12.50
\$20 and under \$25.	10			3	30.00	7	70.00
\$25 and under \$30.	3			3	100.00		
\$30 and under \$35.	1					1	100.00
\$35 and under \$40.	1						
\$40 and under \$45.	3			3	100.00		
\$45 and under \$50.	3			3	100.00		
\$50 and under \$60.	3			4	100.00		
\$60 and under \$70.	4			3	75.00	1	25.00
\$70 and under \$80.	4			1	100.00		
\$80 and under \$90.	1						
\$90 and under \$100.							
\$100 and under \$125.	1			1	100.00		
\$125 and over.							
Total.	45			35	77.78	10	22.22

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
NORTHWESTERN TELEPHONE EXCHANGE CO., TOWNS 25,000 AND OVER.							
Under \$10.....	11	9	81.82			2	18.18
\$10 and under \$15.....							
\$15 and under \$20.....	22	5	22.73	2	9.09	15	68.18
\$20 and under \$25.....	80	15	18.75	4	5.00	61	76.25
\$25 and under \$30.....	75	16	21.33	11	14.67	48	64.00
\$30 and under \$35.....	139	24	17.27	21	15.11	94	67.63
\$35 and under \$40.....	102	13	12.75	31	30.39	58	56.86
\$40 and under \$45.....	49	8	16.33	26	53.06	15	30.61
\$45 and under \$50.....	42	7	16.67	23	54.76	12	28.57
\$50 and under \$60.....	65	3	4.62	57	87.69	5	7.69
\$60 and under \$70.....	89	8	8.99	72	80.90	9	10.11
\$70 and under \$80.....	80	6	7.50	62	77.50	12	15.00
\$80 and under \$90.....	36			34	94.44	2	5.56
\$90 and under \$100.....	11			11	100.00		
\$100 and under \$125.....	8			8	100.00		
\$125 and over.....	10			10	100.00		
Total.....	819	114	13.92	372	45.42	333	40.66
PACIFIC TELEPHONE AND TELEGRAPH CO., LOS ANGELES, CAL.							
Under \$10.....							
\$10 and under \$15.....							
\$15 and under \$20.....							
\$20 and under \$25.....	23	17	73.91	2	8.70	4	17.39
\$25 and under \$30.....	100	50	50.00	9	9.00	41	41.00
\$30 and under \$35.....	81	27	33.33	3	3.70	51	62.96
\$35 and under \$40.....	118	28	23.72	13	11.02	77	65.25
\$40 and under \$45.....	70	24	34.29	8	11.43	38	54.29
\$45 and under \$50.....	44	11	25.00	10	22.73	23	52.27
\$50 and under \$60.....	106	78	73.58	11	10.38	17	16.04
\$60 and under \$70.....	52	26	50.00	10	19.23	16	30.77
\$70 and under \$80.....	47	21	44.68	15	31.91	11	23.40
\$80 and under \$90.....	13	1	7.69	5	38.46	7	53.85
\$90 and under \$100.....	149	103	69.13	3	2.01	43	28.86
\$100 and under \$125.....	64	46	71.88	10	15.63	8	12.50
\$125 and over.....	2			2	100.00		
Total.....	a 869	432	49.71	101	11.62	336	38.67
PACIFIC TELEPHONE AND TELEGRAPH CO., PORTLAND, OREG.							
Under \$10.....							
\$10 and under \$15.....	1			1	100.00		
\$15 and under \$20.....	1			1	100.00		
\$20 and under \$25.....	19	14	73.68	5	26.32		
\$25 and under \$30.....	96	46	47.92	12	12.50	38	39.58
\$30 and under \$35.....	48	10	20.83	5	10.42	33	68.75
\$35 and under \$40.....	97	21	21.65	13	13.40	63	64.95
\$40 and under \$45.....	53	21	39.62	7	13.21	25	47.17
\$45 and under \$50.....	30	9	30.00	5	16.67	16	53.33
\$50 and under \$60.....	73	44	60.27	17	23.29	12	16.44
\$60 and under \$70.....	69	28	40.58	15	21.74	26	37.68
\$70 and under \$80.....	45	22	48.89	16	35.56	7	15.56
\$80 and under \$90.....	14	4	28.57	2	14.29	8	57.14
\$90 and under \$100.....	78	33	42.31	2	2.56	43	55.13
\$100 and under \$125.....	40	22	55.00	10	25.00	8	20.00
\$125 and over.....	6			6	100.00		
Total.....	670	274	40.90	117	17.46	279	41.64

a Including 1, earnings not reported; but not including 14 pieceworkers.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
PACIFIC TELEPHONE AND TELEGRAPH CO., SAN FRANCISCO, CAL.							
Under \$10.....	1			1	100.00		
\$10 and under \$15.....	2					2	100.00
\$15 and under \$20.....	1			1	100.00		
\$20 and under \$25.....							
\$25 and under \$30.....	290	124	42.76	12	4.14	154	53.10
\$30 and under \$35.....	94	14	14.89	9	9.57	71	75.53
\$35 and under \$40.....	104	18	17.31	18	17.31	68	65.38
\$40 and under \$45.....	63	12	19.05	12	19.05	39	61.90
\$45 and under \$50.....	126	20	15.87	23	18.25	83	65.87
\$50 and under \$60.....	93	29	31.18	25	26.88	39	41.94
\$60 and under \$70.....	190	130	68.42	20	10.53	40	21.05
\$70 and under \$80.....	169	89	52.66	32	18.93	48	28.40
\$80 and under \$90.....	48	19	39.58	12	25.00	17	35.42
\$90 and under \$100.....	245	177	72.24	8	3.27	60	24.49
\$100 and under \$125.....	97	65	67.01	15	15.46	17	17.53
\$125 and over.....	28	13	46.43	14	50.00	1	3.57
Total.....	1,551	710	45.78	202	13.02	639	41.20
PACIFIC TELEPHONE AND TELEGRAPH CO., SEATTLE, WASH.							
Under \$10.....							
\$10 and under \$15.....							
\$15 and under \$20.....							
\$20 and under \$25.....	34	31	91.18	3	8.82		
\$25 and under \$30.....	95	45	47.37	6	6.32	44	46.32
\$30 and under \$35.....	56	16	28.57	8	14.29	32	57.14
\$35 and under \$40.....	83	20	24.10	8	9.64	55	66.27
\$40 and under \$45.....	56	17	30.36	8	14.29	31	55.36
\$45 and under \$50.....	32	14	43.75			18	56.25
\$50 and under \$60.....	83	56	67.47	12	14.46	15	18.07
\$60 and under \$70.....	49	18	36.73	24	48.98	7	14.29
\$70 and under \$80.....	58	16	27.59	19	32.76	23	39.66
\$80 and under \$90.....	19	3	15.79	6	31.58	10	52.63
\$90 and under \$100.....	76	47	61.84	3	3.95	26	34.21
\$100 and under \$125.....	29	19	65.52	9	31.03	1	3.45
\$125 and over.....	3			3	100.00		
Total.....	673	302	44.87	109	16.20	262	38.93
ROCKY MOUNTAIN BELL TELEPHONE CO., SALT LAKE CITY, UTAH.							
Under \$10.....							
\$10 and under \$15.....							
\$15 and under \$20.....							
\$20 and under \$25.....	5	1	20.00	2	40.00	2	40.00
\$25 and under \$30.....	20	2	10.00	3	15.00	15	75.00
\$30 and under \$35.....	23	2	8.70	5	21.74	16	69.57
\$35 and under \$40.....	57	10	17.54	6	10.53	41	71.93
\$40 and under \$45.....	23			13	56.52	10	43.48
\$45 and under \$50.....	9	2	22.22	6	66.66	1	11.11
\$50 and under \$60.....	30	9	30.00	12	40.00	9	30.00
\$60 and under \$70.....	45	12	26.67	29	64.44	4	8.89
\$70 and under \$80.....	38	1	2.63	37	97.37		
\$80 and under \$90.....	23	1	4.35	21	91.30	1	4.35
\$90 and under \$100.....	38	11	28.95	17	44.74	10	26.32
\$100 and under \$125.....	18			13	72.22	5	27.78
\$125 and over.....	16	1	6.25	15	93.75		
Total.....	345	52	15.07	179	51.88	114	33.04

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
SOUTHERN BELL TELEPHONE AND TELEGRAPH CO., ATLANTA, GA.							
Under \$10.							
\$10 and under \$15.	20	9	45.00	3	15.00	8	40.00
\$15 and under \$20.	45	5	11.11	7	15.56	33	73.33
\$20 and under \$25.	50	7	14.00	8	16.00	35	70.00
\$25 and under \$30.	36	4	11.11	7	19.44	25	69.44
\$30 and under \$35.	15			4	26.67	11	73.33
\$35 and under \$40.	15	1	6.67	5	33.33	9	60.00
\$40 and under \$45.	5			5	100.00		
\$45 and under \$50.	21			21	100.00		
\$50 and under \$60.	27			26	96.30	1	3.70
\$60 and under \$70.	10			9	90.00	1	10.00
\$70 and under \$80.	5			5	100.00		
\$80 and under \$90.	5			4	80.00	1	20.00
\$90 and under \$100.	6			6	100.00		
\$100 and under \$125.	4			4	100.00		
\$125 and over.							
Total.	264	26	9.85	114	43.18	124	46.97
SOUTHERN BELL TELEPHONE AND TELEGRAPH CO., BIRMINGHAM, ALA.							
Under \$10.							
\$10 and under \$15.	10	2	20.00	8	80.00		
\$15 and under \$20.	26	10	38.46	13	50.00	3	11.54
\$20 and under \$25.	39	13	33.33	23	58.97	3	7.69
\$25 and under \$30.	17	7	41.18	8	47.06	2	11.76
\$30 and under \$35.	8			8	100.00		
\$35 and under \$40.	10	1	10.00	9	90.00		
\$40 and under \$45.	3			3	100.00		
\$45 and under \$50.	13			13	100.00		
\$50 and under \$60.	20	3	15.00	17	85.00		
\$60 and under \$70.	8	2	25.00	6	75.00		
\$70 and under \$80.	4	1	25.00	3	75.00		
\$80 and under \$90.	1			1	100.00		
\$90 and under \$100.	4			4	100.00		
\$100 and under \$125.	2			2	100.00		
\$125 and over.							
Total.	165	39	23.64	118	71.52	8	4.85
SOUTHERN BELL TELEPHONE AND TELEGRAPH CO., RICHMOND, VA.							
Under \$10.							
\$10 and under \$15.	17	4	23.53	10	58.82	3	17.65
\$15 and under \$20.	26	6	23.08	14	53.85	6	23.08
\$20 and under \$25.	10	5	50.00	4	40.00	1	10.00
\$25 and under \$30.	9	2	22.22	3	33.33	4	44.44
\$30 and under \$35.	4			3	75.00	1	25.00
\$35 and under \$40.	1			1	100.00		
\$40 and under \$45.	1			1	100.00		
\$45 and under \$50.							
\$50 and under \$60.							
\$60 and under \$70.							
\$70 and under \$80.							
\$80 and under \$90.							
\$90 and under \$100.							
\$100 and under \$125.							
\$125 and over.							
Total.	68	17	25.00	36	52.94	15	22.06

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

BELL TELEPHONE SYSTEM—Concluded.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
SOUTHWESTERN TELEGRAPH AND TELEPHONE CO., DALLAS, TEX.							
Under \$10.....							
\$10 and under \$15.....	6	6	100.00				
\$15 and under \$20.....	3	3	100.00				
\$20 and under \$25.....	80	24	30.00	9	11.25	47	58.75
\$25 and under \$30.....	76	29	38.16	4	5.26	43	56.58
\$30 and under \$35.....	78	23	29.49	5	6.41	50	64.10
\$35 and under \$40.....	57	20	35.09	12	21.05	25	43.86
\$40 and under \$45.....	20	3	15.00	7	35.00	10	50.00
\$45 and under \$50.....	21	7	33.33	10	47.62	4	19.05
\$50 and under \$60.....	19	3	15.79	12	63.16	4	21.05
\$60 and under \$70.....	19	2	10.53	11	57.89	6	31.58
\$70 and under \$80.....	26	4	15.38	17	65.38	5	19.23
\$80 and under \$90.....	2			2	100.00		
\$90 and under \$100.....	1			1	100.00		
\$100 and under \$125.....	3			3	100.00		
\$125 and over.....	1			1	100.00		
Total.....	412	124	30.10	94	22.82	194	47.09

INDEPENDENT TELEPHONE COMPANIES.

KANSAS CITY HOME TELEPHONE CO., KANSAS CITY, MO.							
Under \$10.....	2			2	100.00		
\$10 and under \$15.....	114	30	26.32	71	62.28	13	11.40
\$15 and under \$20.....	213	44	20.66	125	58.69	44	20.66
\$20 and under \$25.....	142	13	9.15	77	54.23	52	36.62
\$25 and under \$30.....	32	5	15.63	19	59.38	8	25.00
\$30 and under \$35.....	38	10	26.32	25	65.79	3	7.89
\$35 and under \$40.....	18	2	11.11	10	55.56	6	33.33
\$40 and under \$45.....	23	5	21.74	12	52.17	6	26.09
\$45 and under \$50.....	23	1	4.35	16	69.56	6	26.09
\$50 and under \$60.....	56	14	25.00	38	67.86	4	7.14
\$60 and under \$70.....	20			19	95.00	1	5.00
\$70 and under \$80.....	6			4	66.67	2	33.33
\$80 and under \$90.....	2			2	100.00		
\$90 and under \$100.....	2			2	100.00		
\$100 and under \$125.....							
\$125 and over.....							
Total.....	691	124	17.95	422	61.07	145	20.98
LOUISVILLE HOME TELEPHONE CO., LOUISVILLE, KY.							
Under \$10.....							
\$10 and under \$15.....	38	7	18.42	1	2.63	30	78.95
\$15 and under \$20.....	22	2	9.09			20	90.90
\$20 and under \$25.....	30	6	20.00			24	80.00
\$25 and under \$30.....	42	6	14.29	1	2.38	35	83.33
\$30 and under \$35.....	9					9	100.00
\$35 and under \$40.....	4						
\$40 and under \$45.....	2	1	50.00			1	50.00
\$45 and under \$50.....							
\$50 and under \$60.....							
\$60 and under \$70.....	1			1	100.00		
\$70 and under \$80.....							
\$80 and under \$90.....							
\$90 and under \$100.....							
\$100 and under \$125.....							
\$125 and over.....							
Total.....	148	22	14.86	3	2.03	123	83.11

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

INDEPENDENT TELEPHONE COMPANIES—Concluded.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.
MARYLAND TELEPHONE CO., BALTIMORE, MD.							
Under \$10.....	2	1	50.00	1	50.00		
\$10 and under \$15.....	2			2	100.00		
\$15 and under \$20.....	15	6	40.00	8	53.33	1	6.67
\$20 and under \$25.....	24	17	70.83	5	20.83	2	8.33
\$25 and under \$30.....	42	31	73.81	9	21.43	2	4.76
\$30 and under \$35.....	2			2	100.00		
\$35 and under \$40.....	4			4	100.00		
\$40 and under \$45.....	1			1	100.00		
\$45 and under \$50.....							
\$50 and under \$60.....							
\$60 and under \$70.....	1			1	100.00		
\$70 and under \$80.....							
\$80 and under \$90.....							
\$90 and under \$100.....							
\$100 and under \$125.....							
\$125 and over.....							
Total.....	93	55	59.14	33	35.48	5	5.38

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

BOSTON, MASS.							
Under \$10.....	.....	.....	.....	.....	.....	.....	.....
\$10 and under \$15.....	.....	.....	.....	.....	.....	.....	.....
\$15 and under \$20.....	.....	.....	.....	.....	.....	.....	.....
\$20 and under \$25.....	.....	.....	.....	.....	.....	.....	.....
\$25 and under \$30.....	17	2	11.76	9	52.94	6	35.29
\$30 and under \$35.....	11	4	36.36	7	63.64	.....	.....
\$35 and under \$40.....	15	8	53.33	7	46.67	.....	.....
\$40 and under \$45.....	12	8	66.67	4	33.33	.....	.....
\$45 and under \$50.....	6	4	66.67	2	33.33	.....	.....
\$50 and under \$60.....	8	.....	.....	8	100.00	.....	.....
\$60 and under \$70.....	2	.....	.....	2	100.00	.....	.....
\$70 and under \$80.....	1	.....	.....	1	100.00	.....	.....
\$80 and under \$90.....	3	.....	.....	3	100.00	.....	.....
\$90 and under \$100.....	1	.....	.....	1	100.00	.....	.....
\$100 and under \$125.....	2	.....	.....	2	100.00	.....	.....
\$125 and over.....	.....	.....	.....	.....	.....	.....	.....
Total.....	78	26	33.33	46	58.97	6	7.69
CHICAGO, ILL.							
Under \$10.....	.....	.....	.....	.....	.....	.....	.....
\$10 and under \$15.....	.....	.....	.....	.....	.....	.....	.....
\$15 and under \$20.....	4	.....	.....	4	100.00	.....	.....
\$20 and under \$25.....	2	.....	.....	2	100.00	.....	.....
\$25 and under \$30.....	56	29	51.79	21	37.50	6	10.71
\$30 and under \$35.....	12	5	41.67	6	50.00	1	8.33
\$35 and under \$40.....	19	9	47.37	7	36.84	3	15.79
\$40 and under \$45.....	30	15	50.00	11	36.67	4	13.33
\$45 and under \$50.....	9	4	44.44	5	55.56	.....	.....
\$50 and under \$60.....	14	7	50.00	7	50.00	.....	.....
\$60 and under \$70.....	5	1	20.00	4	80.00	.....	.....
\$70 and under \$80.....	5	.....	.....	5	100.00	.....	.....
\$80 and under \$90.....	.....	.....	.....	.....	.....	.....	.....
\$90 and under \$100.....	3	.....	.....	3	100.00	.....	.....
\$100 and under \$125.....	.....	.....	.....	.....	.....	.....	.....
\$125 and over.....	.....	.....	.....	.....	.....	.....	.....
Total.....	159	70	44.03	75	47.17	14	8.81

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAYROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
CINCINNATI, OHIO.							
Under \$10.....							
\$10 and under \$15.....							
\$15 and under \$20.....	1			1	100.00		
\$20 and under \$25.....							
\$25 and under \$30.....	11	6	54.55	5	45.45		
\$30 and under \$35.....	5	3	60.00	2	40.00		
\$35 and under \$40.....	11	4	36.36	7	63.64		
\$40 and under \$45.....	4			4	100.00		
\$45 and under \$50.....	3			3	100.00		
\$50 and under \$60.....	3			3	100.00		
\$60 and under \$70.....	1			1	100.00		
\$70 and under \$80.....							
\$80 and under \$90.....							
\$90 and under \$100.....							
\$100 and under \$125.....							
\$125 and over.....							
Total.....	39	13	33.34	26	66.67		
KANSAS CITY, MO.							
Under \$10.....							
\$10 and under \$15.....							
\$15 and under \$20.....	1			1	100.00		
\$20 and under \$25.....							
\$25 and under \$30.....	4			4	100.00		
\$30 and under \$35.....							
\$35 and under \$40.....	3			3	100.00		
\$40 and under \$45.....							
\$45 and under \$50.....							
\$50 and under \$60.....							
\$60 and under \$70.....	1			1	100.00		
\$70 and under \$80.....							
\$80 and under \$90.....							
\$90 and under \$100.....							
\$100 and under \$125.....							
\$125 and over.....							
Total.....	9			9	100.00		
MINNEAPOLIS, MINN.							
Under \$10.....							
\$10 and under \$15.....							
\$15 and under \$20.....							
\$20 and under \$25.....							
\$25 and under \$30.....	6	4	66.67			2	33.33
\$30 and under \$35.....	4	3	75.00			1	25.00
\$35 and under \$40.....	3	1	33.33	1	33.33	1	33.33
\$40 and under \$45.....	3			3	100.00		
\$45 and under \$50.....	1			1	100.00		
\$50 and under \$60.....	1			1	100.00		
\$60 and under \$70.....							
\$70 and under \$80.....							
\$80 and under \$90.....							
\$90 and under \$100.....							
\$100 and under \$125.....							
\$125 and over.....							
Total.....	18	8	44.44	6	33.33	4	22.22

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Continued.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Continued.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
NEW YORK, N. Y.							
Under \$10.....							
\$10 and under \$15.....							
\$15 and under \$20.....	1			1	100.00		
\$20 and under \$25.....	1			1	100.00		
\$25 and under \$30.....	17	6	35.29	11	64.71		
\$30 and under \$35.....	21	11	52.38	4	19.05	6	28.57
\$35 and under \$40.....	36	17	47.22	14	38.89	5	13.89
\$40 and under \$45.....	73	31	42.47	34	46.58	8	10.96
\$45 and under \$50.....	39	18	46.15	14	35.90	7	17.95
\$50 and under \$60.....	45	19	42.22	25	55.56	1	2.22
\$60 and under \$70.....	25	8	32.00	17	68.00		
\$70 and under \$80.....	4	2	50.00	2	50.00		
\$80 and under \$90.....	8			8	100.00		
\$90 and under \$100.....	1			1	100.00		
\$100 and under \$125.....	3			3	100.00		
\$125 and over.....							
Total.....	274	112	40.88	135	49.27	27	9.85
PHILADELPHIA, PA.							
Under \$10.....							
\$10 and under \$15.....							
\$15 and under \$20.....	1		100.00	1	100.00		
\$20 and under \$25.....	2	2	100.00				
\$25 and under \$30.....	8	3	37.50	4	50.00	1	12.50
\$30 and under \$35.....	24	9	37.50	11	45.83	4	16.67
\$35 and under \$40.....	23	8	34.78	7	30.43	8	34.78
\$40 and under \$45.....	27	2	7.41	19	70.37	6	22.22
\$45 and under \$50.....	12	2	16.67	9	75.00	1	8.33
\$50 and under \$60.....	5			5	100.00		
\$60 and under \$70.....	6			6	100.00		
\$70 and under \$80.....	1			1	100.00		
\$80 and under \$90.....							
\$90 and under \$100.....	1			1	100.00		
\$100 and under \$125.....	1			1	100.00		
\$125 and over.....							
Total.....	111	26	23.42	65	58.56	20	18.02
PITTSBURG, PA.							
Under \$10.....							
\$10 and under \$15.....							
\$15 and under \$20.....							
\$20 and under \$25.....	3			3	100.00		
\$25 and under \$30.....	5	1	20.00	4	80.00		
\$30 and under \$35.....	10	4	40.00	6	60.00		
\$35 and under \$40.....	5	1	20.00	4	80.00		
\$40 and under \$45.....	6	4	66.67	1	16.67	1	16.67
\$45 and under \$50.....	8	3	37.50	5	62.50		
\$50 and under \$60.....	7			7	100.00		
\$60 and under \$70.....	1			1	100.00		
\$70 and under \$80.....	2			2	100.00		
\$80 and under \$90.....	1			1	100.00		
\$90 and under \$100.....	1			1	100.00		
\$100 and under \$125.....							
\$125 and over.....							
Total.....	49	13	26.53	35	71.43	1	2.04

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

C.—NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS, AT SPECIFIED RATES—Concluded.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Concluded.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
ST. LOUIS, MO.							
Under \$10.....							
\$10 and under \$15.....							
\$15 and under \$20.....	1			1	100.00		
\$20 and under \$25.....							
\$25 and under \$30.....	3	2	66.67	1	33.33		
\$30 and under \$35.....	8	3	37.50	5	62.50		
\$35 and under \$40.....	10	1	10.00	9	90.00		
\$40 and under \$45.....	2			2	100.00		
\$45 and under \$50.....	3			3	100.00		
\$50 and under \$60.....	3			3	100.00		
\$60 and under \$70.....							
\$70 and under \$80.....							
\$80 and under \$90.....	1	1	100.00				
\$90 and under \$100.....							
\$100 and under \$125.....							
\$125 and over.....							
Total.....	31	7	22.58	24	77.42		

D.—SUMMARY, FOR TELEPHONE SYSTEMS, OF NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES.

BELL TELEPHONE SYSTEM.

Under \$10.....	68	11	16.18	48	70.59	9	13.24
\$10 and under \$15.....	217	20	9.22	127	58.53	70	32.26
\$15 and under \$20.....	1,282	428	33.39	553	43.14	301	23.48
\$20 and under \$25.....	2,662	678	25.47	1,044	39.22	940	35.31
\$25 and under \$30.....	4,423	1,136	25.68	1,624	36.72	1,663	37.60
\$30 and under \$35.....	5,454	1,264	23.18	2,792	51.19	1,398	25.63
\$35 and under \$40.....	4,046	1,007	24.89	2,005	49.56	1,034	25.56
\$40 and under \$45.....	3,212	660	20.55	2,048	63.76	504	15.69
\$45 and under \$50.....	1,873	510	27.23	1,000	53.39	363	19.38
\$50 and under \$60.....	3,881	1,030	26.54	2,161	55.68	690	17.78
\$60 and under \$70.....	3,447	601	17.44	2,323	67.39	523	15.17
\$70 and under \$80.....	3,084	540	17.51	1,988	64.46	556	18.03
\$80 and under \$90.....	1,411	190	13.47	982	69.60	239	16.94
\$90 and under \$100.....	1,352	453	33.51	599	44.30	300	22.19
\$100 and under \$125.....	931	201	21.59	636	68.31	94	10.10
\$125 and over.....	515	17	3.30	494	95.92	4	.78
Total.....	437,858	8,746	23.10	20,424	53.95	8,688	22.95

^a Not including 25 pieceworkers; and also 3, no earnings reported.

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

D.—SUMMARY, FOR TELEPHONE SYSTEMS, OF NUMBER AND PER CENT OF EMPLOYEES WHOSE EARNINGS DURING THE RESPECTIVE PAY-ROLL PERIODS WERE LESS THAN, EQUAL TO, OR GREATER THAN FULL TIME EARNINGS AT SPECIFIED RATES—Concluded.

INDEPENDENT TELEPHONE COMPANIES.

Classified monthly rate of wages.	Total employees.	Employees whose earnings during the respective pay-roll periods were—					
		Less than full time earnings at specified rates.		Equal to full time earnings at specified rates.		Greater than full time earnings at specified rates.	
		Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.
Under \$10.....	2	1	50.00	1	50.00	.....	.....
\$10 and under \$15.....	40	7	17.50	3	7.50	30	75.00
\$15 and under \$20.....	39	8	20.51	10	25.64	21	53.85
\$20 and under \$25.....	168	53	31.55	76	45.24	39	23.21
\$25 and under \$30.....	297	81	27.27	135	45.45	81	27.27
\$30 and under \$35.....	153	13	8.50	79	51.63	61	39.87
\$35 and under \$40.....	40	5	12.50	23	57.50	12	30.00
\$40 and under \$45.....	41	11	26.83	26	63.41	4	9.76
\$45 and under \$50.....	18	2	11.11	10	55.56	6	33.33
\$50 and under \$60.....	23	5	21.74	12	52.17	6	26.09
\$60 and under \$70.....	25	1	4.00	18	72.00	6	24.00
\$70 and under \$80.....	56	14	25.00	38	67.86	4	7.14
\$80 and under \$90.....	20	.....	.....	19	95.00	1	5.00
\$90 and under \$100.....	6	4	66.67	2	33.33	.....	.....
\$100 and under \$125.....	2	.....	.....	2	100.00	.....	.....
\$125 and over.....	2	.....	.....	2	100.00	.....	.....
Total.....	932	205	22.00	456	48.93	271	29.08

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

Under \$10.....	.....	.....	.....	.....	.....	.....	.....
\$10 and under \$15.....	9	.....	.....	9	100.00	.....	.....
\$15 and under \$20.....	.....	.....	.....	6	75.00	.....	.....
\$20 and under \$25.....	8	2	25.00	.....	.....	.....	.....
\$25 and under \$30.....	127	53	41.73	59	46.46	15	11.81
\$30 and under \$35.....	95	42	44.21	41	43.16	12	12.63
\$35 and under \$40.....	125	49	39.20	59	47.20	17	13.60
\$40 and under \$45.....	157	60	38.22	78	49.68	19	12.10
\$45 and under \$50.....	81	31	38.27	42	51.85	8	9.88
\$50 and under \$60.....	86	26	30.23	59	68.60	1	1.16
\$60 and under \$70.....	41	9	21.95	32	78.05	.....	.....
\$70 and under \$80.....	13	2	15.38	11	84.62	.....	.....
\$80 and under \$90.....	13	1	7.69	12	92.31	.....	.....
\$90 and under \$100.....	7	.....	.....	7	100.00	.....	.....
\$100 and under \$125.....	6	.....	.....	6	100.00	.....	.....
Total.....	768	275	35.81	421	54.82	72	9.38

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.**E.—NUMBER AND PER CENT OF OPERATORS, BY CLASSIFIED WAGE GROUPS.****BELL TELEPHONE SYSTEM.**

Classified monthly rate of wages.	Bell Telephone Co. of Missouri, St. Louis, Mo.		Bell Telephone Co. of Pennsylvania, Philadelphia, Pa.		Central District and Printing Telegraph Co., Pittsburgh, Pa.		Central Union Telephone Co., Indianapolis, Ind.		Chesapeake and Potomac Telephone Co., Baltimore, Md.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$10.....										
\$10 and under \$15.....	1				2	0.35			8	2.31
\$15 and under \$20.....		0.21			35	6.04	3	1.67	27	7.80
\$20 and under \$25.....	80	17.17	59	7.87	72	12.44	67	37.22	33	9.54
\$25 and under \$30.....	162	34.76	263	35.07	317	54.75	71	39.44	67	19.36
\$30 and under \$35.....	101	21.67	272	36.27	117	20.21	30	16.67	204	58.96
\$35 and under \$40.....	78	16.74	149	19.87	31	5.35	9	5.00	4	1.16
\$40 and under \$45.....	44	9.44	7	.93	2	.35			1	.29
\$45 and under \$50.....					1	.17			1	.29
\$50 and under \$55.....					1	.17			1	.29
\$55 and over.....										
Not reported.....					1	.17				
Total.....	466	100.00	750	100.00	579	100.00	180	100.00	346	100.00

Classified monthly rate of wages.	Chesapeake and Potomac Telephone Co., Washington, D. C.		Chicago Telephone Co., Chicago, Ill.		Cincinnati and Suburban Bell Telephone Co., Cincinnati, Ohio.		Citizens Telephone Co., Covington, Ky.		Cleveland Telephone Co., Cleveland, Ohio.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$10.....										
\$10 and under \$15.....			5	0.15			1	1.52	2	0.62
\$15 and under \$20.....	54	18.95	128	3.78	36	5.94	3	4.55	10	3.11
\$20 and under \$25.....	45	15.79	731	21.60	31	5.12	5	7.58	117	36.34
\$25 and under \$30.....	36	12.63	459	13.56	225	37.13	27	40.91	116	36.02
\$30 and under \$35.....	143	50.18	822	24.28	276	45.54	30	45.45	56	17.39
\$35 and under \$40.....	6	2.11	732	21.62	33	5.45			16	4.97
\$40 and under \$45.....	1	.35	472	13.94	1	.17			5	1.55
\$45 and under \$50.....			28	.83						
\$50 and under \$55.....			8	.24						
\$55 and over.....					4	.66				
Not reported.....										
Total.....	255	100.00	3,385	100.00	606	100.00	66	100.00	322	100.00

Classified monthly rate of wages.	Colorado Telephone Co., Denver, Colo.		Cumberland Telephone and Telegraph Co., Louisville, Ky.		Cumberland Telephone and Telegraph Co., Nashville, Tenn.		Cumberland Telephone and Telegraph Co., New Orleans, La.		Missouri and Kansas Telephone Co., cities and towns under 5,000.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$10.....									9	2.60
\$10 and under \$15.....			14	11.76	10	5.71			44	12.72
\$15 and under \$20.....			18	15.13	32	18.29	16	8.47	134	38.73
\$20 and under \$25.....	2	0.59	20	16.81	27	15.43	38	20.11	114	32.95
\$25 and under \$30.....	67	19.76	50	42.02	102	58.29	108	57.14	35	10.12
\$30 and under \$35.....	41	12.09	15	12.61	1	.57	27	14.29	7	2.02
\$35 and under \$40.....	169	49.85	2	1.68	3	1.71			1	.29
\$40 and under \$45.....	55	16.22							2	.58
\$45 and under \$50.....	3	.88								
\$50 and under \$55.....										
\$55 and over.....	2	.59								
Total.....	339	100.00	119	100.00	175	100.00	189	100.00	346	100.00

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.

B.—NUMBER AND PER CENT OF OPERATORS, BY CLASSIFIED WAGE GROUPS—Cont'd.

BELL TELEPHONE SYSTEM—Continued.

Classified monthly rate of wages.	Missouri and Kansas Telephone Co., cities 5,000 and under 15,000.		Missouri and Kansas Telephone Co., cities 15,000 and under 25,000.		Missouri and Kansas Telephone Co., cities 25,000 and over.		Nebraska Telephone Co., Omaha, Nebr.		New England Telephone and Telegraph Co., Boston, Mass.	
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
Under \$10.....	5	2.36	1	0.84	4	0.72				
\$10 and under \$15....	9	4.25	2	1.68	108	19.46	14	5.45	1	0.06
\$15 and under \$20....	57	26.89	19	15.97	112	20.18	39	15.18	133	8.18
\$20 and under \$25....	108	50.94	38	31.93	140	25.23	53	20.62	345	21.23
\$25 and under \$30....	21	9.91	47	39.50	112	20.18	84	32.68	627	38.58
\$30 and under \$35....	11	5.19	9	7.56	41	7.39	56	21.79	254	15.63
\$35 and under \$40....	1	.47	3	2.52	23	4.14	9	3.50	260	16.00
\$40 and under \$45....					8	1.44			1	.06
\$45 and under \$50....					2	.36	1	.39	4	.25
\$50 and under \$55....					5	.90	1	.39		
\$55 and over.....										
Total.....	212	100.00	119	100.00	555	100.00	257	100.00	1,625	100.00

Classified monthly rate of wages.	New York Telephone Co., New York, N. Y.		Northwestern Telephone Exchange Co., cities and towns under 5,000.		Northwestern Telephone Exchange Co., cities 5,000 and under 15,000.		Northwestern Telephone Exchange Co., cities 15,000 and under 25,000.		Northwestern Telephone Exchange Co., cities 25,000 and over.	
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
Under \$10.....			1	1.92	1	0.67				
\$10 and under \$15....	7	0.25			19	12.75	6	25.00	20	6.15
\$15 and under \$20....	18	.64	7	13.46	36	24.16	7	29.17	78	24.00
\$20 and under \$25....	40	1.42	12	23.08	51	34.23	10	41.67	59	18.15
\$25 and under \$30....	152	5.38	26	50.00	36	24.16			118	36.31
\$30 and under \$35....	1,032	36.53	6	11.54	5	3.36			45	13.85
\$35 and under \$40....	820	29.03			1	.67			5	1.54
\$40 and under \$45....	666	23.58					1	4.17		
\$45 and under \$50....	83	2.94								
\$50 and under \$55....	5	.18								
\$55 and over.....	2	.07								
Total.....	2,825	100.00	52	100.00	149	100.00	24	100.00	325	100.00

Classified monthly rate of wages.	Pacific Telephone and Telegraph Co., Los Angeles, Cal.		Pacific Telephone and Telegraph Co., Portland, Oreg.		Pacific Telephone and Telegraph Co., San Francisco, Cal.		Pacific Telephone and Telegraph Co., Seattle, Wash.		Rocky Mountain Bell Telephone Co., Salt Lake City, Utah.	
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
Under \$10.....					1	0.20				
\$10 and under \$15....										
\$15 and under \$20....										
\$20 and under \$25....	1	0.31								
\$25 and under \$30....	89	27.30	90	32.73	196	38.51	86	32.21	17	20.73
\$30 and under \$35....	71	21.78	46	16.73	84	16.50	47	17.60	16	19.51
\$35 and under \$40....	94	28.83	81	29.45	71	13.95	70	26.22	43	52.44
\$40 and under \$45....	51	15.64	42	15.27	43	8.45	43	16.10	6	7.32
\$45 and under \$50....	18	5.52	13	4.73	94	18.47	21	7.87		
\$50 and under \$55....	1	.31	2	.73	17	3.34				
\$55 and over.....	1	.31	1	.36	3	.59				
Total.....	326	100.00	275	100.00	509	100.00	267	100.00	82	100.00

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Continued.**E.—NUMBER AND PER CENT OF OPERATORS, BY CLASSIFIED WAGE GROUPS—Cont'd.****BELL TELEPHONE SYSTEM—Concluded.**

Classified monthly rate of wages.	Southern Bell Telephone and Telegraph Co., Atlanta, Ga.		Southern Bell Telephone and Telegraph Co., Birmingham, Ala.		Southern Bell Telephone and Telegraph Co., Richmond, Va.		Southwestern Telephone and Telegraph Co., Dallas, Tex.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$10.....								
\$10 and under \$15.....								
\$15 and under \$20.....	16	11.51	7	9.59				
\$20 and under \$25.....	40	28.78	25	34.25	17	29.82	67	28.51
\$25 and under \$30.....	47	33.81	29	39.73	25	43.86	70	29.79
\$30 and under \$35.....	30	21.58	11	15.07	9	15.79	71	30.21
\$35 and under \$40.....	6	4.32	1	1.37	5	8.77	25	10.64
\$40 and under \$45.....					1	1.75	2	.85
\$45 and under \$50.....								
\$50 and under \$55.....								
\$55 and over.....								
Not reported.....								
Total.....	139	100.00	73	100.00	57	100.00	235	100.00

INDEPENDENT TELEPHONE COMPANIES.

Classified monthly rate of wages.	Kansas City Home Telephone Co., Kansas City, Mo.		Louisville Home Telephone Co., Louisville, Ky.		Maryland Telephone Co., Baltimore, Md.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$10.....						
\$10 and under \$15.....			38	30.40	1	1.28
\$15 and under \$20.....			21	16.80	14	17.95
\$20 and under \$25.....	111	30.41	29	23.20	21	26.92
\$25 and under \$30.....	195	53.42	37	29.60	39	50.00
\$30 and under \$35.....	59	16.16			1	1.28
\$35 and under \$40.....					1	1.28
\$40 and under \$45.....					1	1.28
\$45 and under \$50.....						
\$50 and under \$55.....						
\$55 and over.....						
Not reported.....						
Total.....	365	100.00	125	100.00	78	100.00

AMERICAN TELEPHONE AND TELEGRAPH COMPANY.

Classified monthly rate of wages.	Boston, Mass.		Chicago, Ill.		Cincinnati, Ohio.		Kansas City, Mo.		Minneapolis, Minn.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$10.....										
\$10 and under \$15.....										
\$15 and under \$20.....										
\$20 and under \$25.....			1	0.97						
\$25 and under \$30.....	17	33.33	54	52.43	10	38.46	4	57.14	6	46.15
\$30 and under \$35.....	8	15.69	10	9.71	5	19.23			4	30.77
\$35 and under \$40.....	14	27.45	17	16.50	10	38.46	3	42.86	2	15.39
\$40 and under \$45.....	9	17.65	18	17.48	1	3.85			1	7.69
\$45 and under \$50.....	2	3.92	3	2.91						
\$50 and under \$55.....	1	1.96								
\$55 and over.....										
Not reported.....										
Total.....	51	100.00	103	100.00	26	100.00	7	100.00	13	100.00

TABLE V.—RATES OF WAGES AND EARNINGS OF EMPLOYEES IN CERTAIN TELEPHONE COMPANIES DURING A PAY-ROLL PERIOD IN 1908, AS REPORTED BY OFFICIALS OF THE COMPANIES—Concluded.

E.—NUMBER AND PER CENT OF OPERATORS, BY CLASSIFIED WAGE GROUPS—Concl'd.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY—Concluded.

Classified monthly rate of wages.	New York, N. Y.		Philadelphia, Pa.		Pittsburg, Pa.		St. Louis, Mo.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under \$10.....								
\$10 and under \$15.....								
\$15 and under \$20.....								
\$20 and under \$25.....			2	2.74	3	9.09		
\$25 and under \$30.....	16	8.56	8	10.96	5	15.15	3	15.00
\$30 and under \$35.....	21	11.23	22	30.14	9	27.27	8	40.00
\$35 and under \$40.....	35	18.72	23	31.51	5	15.15	8	40.00
\$40 and under \$45.....	67	35.83	15	20.55	5	15.15	1	5.00
\$45 and under \$50.....	34	18.18	3	4.11	6	18.18		
\$50 and under \$55.....	14	7.49						
\$55 and over.....								
Not reported.....								
Total.....	187	100.00	73	100.00	33	100.00	20	100.00

APPENDIXES.

APPENDIX A.

FORMS OF SCHEDULES USED IN TELEPHONE INVESTIGATION.

[B. L. 433.—Department of Commerce and Labor, Bureau of Labor, 1908.]

Special Agent.

TELEGRAPH AND TELEPHONE INVESTIGATION.

(Establishment schedule.)

TELEPHONE.

1. Name of company?
2. Bell or independent? If independent, what are your long-distance connections?
3. State? 4. City?
5. Name and location of exchange?
6. Name and official designation of person furnishing the information?
7. Does this exchange handle local calls? Toll calls?
- Long-distance calls?
8. Number of branch and suburban exchanges?

Operating rooms.

9. On which floor?	10. Dimensions (feet).			11. Greatest number of persons employed in room at any one time.
	Length.	Breadth.	Height.	
a.
b.
c.

12. Ventilation, how provided?

Time allowance for handling calls.

	Time allowance for—		
	13. Connection.	14. Disconnection.	15. Obtaining information.
a. "A" board.....
b. "B" board.....
c. Toll board.....
d. Information.....

16. What is the efficiency number of plug connections, per hour, for an "A" operator?; "B" operator?; Toll operator?
17. What is the entire number of line terminals in this office?
Number of stations?

49. Frequency of payment? By check or cash?
 50. Are wages paid to date?; If not, how many days' pay is withheld?
 51. Extras (lunch, car fare, etc.)?

General.

52. Are operators permitted any choice in assignment to exchange, special shifts in which to work, etc.?
 53. What educational standard is required of applicants for employment?
 54. Ages at which applicants are accepted?
 55. Is employment given to girl beginners who do not live at home?
 56. Are married women employed?; If not, state reasons:
 57. What points are considered in making physical examination of applicants for operating positions?
 58. Does company employ any medical inspector (nurse, doctor)?
 If so, what are the duties of this officer?
 59. Are periodic medical examinations made of operators in service?
 60. What provisions are made to handle cases of temporary illness?
 61. Is there any systematic disinfection of caps and receivers?
 62. Is sick leave granted?; With full pay?; How many days per year?
 63. Does franchise make any regulations concerning the protection of health, comfort, and safety of women employees?
 64. Duties of matrons?
 65. "P. B. X." boards: How do operators obtain positions on them?
 Rates of pay?
 66. a. Give outline of day organization chart:
 b. Give outline of night organization chart:
 67. What is traffic curve or table as plotted for a given day of 24 hours in March, 1908?
 a. What is operating curve or table for the same 24 hours in March, 1908?

Service conditions in operation.

68. Class of service.	69. Number of lines in service.	70. Rates charged.	71. Length of conversation allowed (minutes).
a. Flat rate.....
b. Measured service.....
c. Automatic slot machines.....
d. ....party lines.....
e. ....party lines.....
f. ....party lines.....
g. Toll lines.....
h. Long distance.....

72. In measured time service, when does time-count begin? a. On local calls?
 b. On toll calls?; c. On long-distance calls?
 73. What extra time is allowed for terminating conversation?
 a. On local calls?; b. On toll calls?
 c. On long-distance calls?
 74. How many telephones are allowed on each class of service, and what are rates for each extra extension telephone?
 75. How many names may be listed in the telephone directory on each class of service, and what rate is charged for each extra name listed?
 76. Type of switchboard used?
 a. Width of section?; b. Positions per section?
 c. Maximum possible height of top jack above shelf?inches.
 d. Height above head (when seated) operators are required to reach?inches.
 e. Distance of side reach in inches: (1) By day?; (2) By night?
 f. Are operators required to stand while at work?
 g. Type of chair and foot rest used?
 77. a. Is there a separate lunch room provided?
 b. Is there a separate rest room provided?
 78. Describe toilet facilities.
 a. Number of washbowls?; b. Number of seats?

[B. L. 435.—Department of Commerce and Labor, Bureau of Labor, 1908.]

TELEGRAPH AND TELEPHONE INVESTIGATION.

(Branch exchange sheet.)

TELEPHONE.

1. Name of company?; 2. City and State?
 3. Name and location of local exchange?
 4. Operating room: *a.* Size?; *b.* On which floor?

Switchboard.

5. Type of switchboard used?
a. Width of section?; *b.* Positions per section?
c. Maximum possible height of top jack above shelf?inches.
d. Height above head (when seated) operators are required to reach?inches.
e. Distance of side reach in inches: (1) By day?; (2) By night?
f. Are operators required to stand while at work?
g. Type of chair and foot rest used?

Operating positions and force.

Kind of work.	Entire number of—			
	6. "A" positions in service.	7. "B" positions in service.	8. "A" operating force.	9. "B" operating force.
<i>a.</i> Day work.....
<i>b.</i> Evening work.....
<i>c.</i> Night work.....

10. What is entire number of line terminals in this office?
 Stations?
 11. *a.* Is there a separate lunch room provided?
b. Is there a separate rest room provided?
 12. What special care is available in case of illness?
 13. What is traffic curve or table for a given 24 hours in March, 1908?
 14. What is operating curve or table for the same 24 hours in March, 1908?

[B. L. 434.—Department of Commerce and Labor, Bureau of Labor, 1908.]

TELEGRAPH AND TELEPHONE INVESTIGATION.

(Establishment schedule—Supplement.)

TELEPHONE.

Operating and traffic table for 24 hours, day of , 1908.

Shifting of operating force and amount of traffic.

During hour ending—	Number of original calls.	Number of operators.	Number of calls per operator.
1 a. m.
2 a. m.
3 a. m.
4 a. m.
5 a. m.
6 a. m.
7 a. m.
8 a. m.
9 a. m.
10 a. m.
11 a. m.
12 m.
1 p. m.
2 p. m.
3 p. m.
4 p. m.
5 p. m.
6 p. m.
7 p. m.
8 p. m.
9 p. m.
10 p. m.
11 p. m.
12 p. m.

.....,
Special Agent.

(Agent's personal observation schedule.)

1. Name of company?.....
2. State?..... 3. City?.....
4. Name and location of exchange?.....

Building.

5. Constructed of?.....
6. Number of stories?..... a. On which floor is operating room?.....
7. Entrance for operators: a. Street ☐; alley ☐
 b. Conditions?.....
8. Halls and stairways?.....

Yes	No <input type="radio"/>

9. Elevators?..... Used by employees?
10. What fire escapes are provided?.....
11. What provisions are made for fighting fire?.....

Operating room.

Yes	No <input type="radio"/>
-----	--------------------------

12. Is there sufficient ventilation?

Yes	No

13. Light: *a.* Natural or artificial by day?..... Sufficient?

b. Kind at night?..... Sufficient?

14. What is character of floor covering (where supervisors walk)?.....
- Notes:

Switchboard.

15. Type of switchboard used?.....
- a. Width of section?..... b. Positions per section?.....
- c. Maximum possible height of top jacks above shelf?.....inches.
- d. Height above head (when seated) operators are required to reach?.....inches.
- e. Distance of side reach?.....
- f. Are operators ever required to stand while at work?.....
- g. Type of chair and foot rest used?

Yes	No <input type="radio"/>
-----	--------------------------

16. Is a lunch room provided? ☐ ☐ If so, describe fully.....
17. What food, if any, is provided free of expense to operators?.....

Yes	No <input type="radio"/>
-----	--------------------------

18. Are rest rooms provided? ☐ If so describe fully.....

Yes	No
-----	----

19. Is wash room provided? ☐ ☐ a. Number of bowls?
- b. General conditions? ☐

20. Toilets:

a. Number of seats for women?

Yes	No	<input type="radio"/>

b. Is there reasonable privacy of approach?

c. Sanitary conditions?

d. Are conditions and location such that the air of the operating room is

<input type="radio"/> Yes	No

affected?

e. Total number of women in building at any one time having use of no other facilities?

21. What other provisions for the comfort of operating forces?

22. Shock (frequency, severity, etc.)?

23. Are employees ever required to release the company from liability in case of shock

<input type="radio"/> Yes	No

or other accident?

24. Are there any clubs or other organizations among your operating forces?

Notes:

25. Is there any system of fines or suspensions?, (If so, give cause and extent.)

a. To what funds do fines accrue?

26. To whom can complaints of operating force be made?

a. How (by letter, personally, etc.)?

Notes:

[B. L.—436.]

TELEGRAPH AND TELEPHONE: PAY ROLL DATA.

Period covered, 190 .

Name of company. City. State.

Name of employee. Sex.

Occupation. Hours in regular full day.

Number of days on which employee worked. Number of days employee did not work.

Number of hours employee worked on regular tricks.

Number of hours employee worked overtime. Total hours worked.

Rate of wages per. \$

Amount earned at regular rate. \$

Amount of overtime earnings. \$

Amount of bonus earnings. \$

Total earnings. \$

Amount of fines and deductions. \$

Net earnings. \$

[B. L. 430.—Department of Commerce and Labor, Bureau of Labor, 1908.]

.....
Special Agent.

TELEGRAPH AND TELEPHONE INVESTIGATION.

(Individual schedule.)

TELEPHONE.

1. Employing company?

2. State? 3. City?

4. Name and location of exchange where employed?

5. Position of employee? { day. night.
evening split trick

6. Age? 7. Sex?

8. How long in telephone service?

9. How long in service of present employing company?

10. Age on entering service?

History of occupations in telephone service.

[In case of break in data, indicate by starred line, and give hours, wages, etc., at period of first entering telephone service.]

11. Occupation(beginning with present occupation and going back to first employment).	12. Daily hours of work, from—	13. Actual hours worked.	14. Wages.	15. Period each rate was received.
a. ....	..... m. to m.	.....	\$ ..... per.....	.....
b. ....	..... m. to m.	.....	..... per.....	.....
c. ....	..... m. to m.	.....	..... per.....	.....
d. ....	..... m. to m.	.....	..... per.....	.....
e. ....	..... m. to m.	.....	..... per.....	.....
f. ....	..... m. to m.	.....	..... per.....	.....
g. ....	..... m. to m.	.....	..... per.....	.....

Notes:

16. Time allowed, at present, for lunch?; For relief?

17. Is relief ever curtailed?.....

<input type="radio"/> Yes	<input type="radio"/> No
<input type="radio"/>	<input type="radio"/>

18. Is lunch time ever curtailed?

<input type="radio"/> Yes	<input type="radio"/> No
<input type="radio"/>	<input type="radio"/>

19. Do you ever work overtime? a. Do you desire overtime?

d. Extreme length of overtime day?

c. Opinion as to overtime work?

<input type="radio"/> Yes	<input type="radio"/> No
<input type="radio"/>	<input type="radio"/>

20. Is split trick optional? a. How is time spent between tricks?

Notes:

21. What holidays are allowed during year?

22. How frequently is Sunday work required?

23. What vacation is granted?

24. Describe conditions of evening and night work (force, protection, etc.).....

25. Rate of pay while learning?

26. Frequency of promotions?

<input type="radio"/> Yes	<input type="radio"/> No
<input type="radio"/>	<input type="radio"/>

27. Rates of pay for: a. Overtime? a. Automatic?

b. Holidays and Sundays? c. Sick leave?

<input type="radio"/> Yes	<input type="radio"/> No
<input type="radio"/>	<input type="radio"/>

28. Is vacation paid? In advance?

29. Extras (car fare, lunches, etc.)

Notes:

30. Fines or suspensions (cause and extent)?

31. To whom can complaints be made and how?

Notes:

Building.

32. Do you use the elevator going to and from work?

<input type="radio"/> Yes	<input type="radio"/> No
<input type="radio"/>	<input type="radio"/>

33. Is entrance from street or alley? a. Sufficiently lighted?

34. Describe condition of operating room as to ventilation, light, and general comfort:

35. Describe condition of rest, lunch, and toilet rooms as to ventilation, light, overcrowding, etc.:

36. Provision of food for operators (privileges and restrictions)?
 a. What is your personal attitude?
 37. Do operators contribute toward food, books, or furnishings?
 38. Attitude toward any club or other organization maintained in your exchange?

Notes:

Switchboard.

39. Can you reach top jacks in multiple when seated?
 40. What height above head (when seated) are you required to reach?
 41. What is greatest side reach?
 42. Maximum number of positions covered?
 43. Are you ever required to stand while at work?
 44. How many seconds allowed for making a connection?
 45. How many seconds allowed to disconnect?
 46. Average number of plug connections in a busy hour?
 47. Upon entering service, what educational standard was required?
 a. School grade last attended?
 48. Have you ever been given any choice: *a.* In the exchange to which you were
 sent?
 b. In the hours worked?
 49. Why did you go into telephone work?
 50. Why do you stay in telephone work?
 Notes:

Health regulations.

51. What physical examination was made upon entering service?
 a. By whom made?

<input type="radio"/> Yes	No

52. Are any examinations made of operators in service?

<input type="radio"/> Yes	No

53. Has employment in any way affected your health?

54. In case of accident or illness, what care is available?

Yes	No

55. If special room is provided in case of illness, is it kept solely for
 that purpose?

56. Shock (frequency, severity, etc.)?

<input type="radio"/> Yes	No

57. Were you ever asked to release company from liability in case of
 shock, accident, etc.?

Yes	No

58. Does each operator keep her own operating set?

59. Is operating set disinfected regularly?

60. Is operating set disinfected at pleasure?

61. Do you live at home, or board?

62. Amount paid per week for board? \$.....; Room? \$.....

63. Distance from residence to place of employment?miles.

64. Do you usually walk or ride to and from work?

65. Total time required going to and returning from work?

Notes:

APPENDIX B.

SPECIMEN OF FIRST LESSONS IN TELEPHONE OPERATING.

LESSON 1.

1. There are twenty-one city exchanges in Chicago which are divided into nine divisions or districts. The following list gives the names of the exchanges and the division to which they belong: [Here follows list which must be memorized.]

* * * * *

There are seventeen neighborhood exchanges as follows:

* * * * *

Calls for neighborhood exchange numbers are sent through city exchanges according to a routing chart which is posted in front of each operator's position.

2. DEFINITION OF A LOCAL CONNECTION:

When one subscriber in an exchange calls another subscriber in the same exchange this is called a local connection.

3. DESCRIPTION OF A COMPLETED LOCAL CONNECTION:

(1) When a subscriber takes the receiver off the hook of his telephone, the line and pilot lamp signals light up in front of "A" operator.

(2) She picks up an inside cord, known as an answering cord, inserts the plug in answering jack above the line lamp signal, and at the same time throws the corresponding listening key toward the face of switchboard. The plug puts out the lights, and the key enables operator to talk to subscriber.

(3) In a clear, distinct tone with the rising inflection on the word "please," she says, "Number please?" "Number please?" to be repeated if no response is received the first time. If subscriber can not be heard operator will say, "Please come closer to your telephone."

If subscriber fails to give name of the exchange wanted operator will say, "What exchange please?"

If subscriber gives name of exchange, but omits number, operator will say, "What number please?"

(4) The subscriber gives number wanted, "Central 128," Operator repeats it back to subscriber, separating the figures, as, "Central one-two-eight."

(5) She then picks up outside cord, known as the connecting cord, corresponding to answering cord in use, locates multiple jack of Central 128, and lightly taps the tip of plug against the outer rim of multiple jack three times, resting on the last stroke.

(6) If no sound is heard, connecting cord is inserted in multiple jack.

(7) And the corresponding ringing key drawn toward operator steadily for at least two seconds, thus enabling her to ring the bell on the called party's instrument, after which the key is allowed to fall back to the normal or vertical position, thus leaving the line clear for both parties to talk. The insertion of the plug causes the lamp on the connecting cord to light up. The lamp remains lighted until the called party lifts the receiver off the hook of telephone, when it will go out, both cord lamps remaining out while the parties are talking.

(8) When both parties are through talking and hang receivers on the hooks, both cord lamps will light up again. Operator then disconnects by taking down inside cord first and then outside cord, and restoring them to their regular positions. Operator will always disconnect when the inside lamp lights, or both, but not when only outside lamp lights.

The cord lamps are called supervisory signals or disconnect signals.

LESSON 2.

1. PLUGGED LINE INSTRUCTIONS:

A red plug in multiple jack means telephone taken out. Operator will say "Central one-two-eight has been taken out."

A green plug in multiple jack means question call. Operator will connect subscriber with hospital operator.

A black plug in multiple jack means wrong number. Operator will say, "Central one-two-eight is wrong number, please refer to your directory."

A white plug in multiple jack with "O. W." on face means, one-way telephone. Operator will say, "Central one-two-eight is a one-way line, entitled to outgoing calls only."

A white plug in multiple jack with number on the face means that the number the plug is in has been changed to number on the plug. Operator will say, "Central one-two-eight has been changed to Central one-eight-four, I will connect you," and connect subscriber with correct number.

A white plug in multiple jack with prefix and number on face means that the number the plug is in has been changed to number on the plug. Operator will say, "Central one-two-eight has been changed to Main one-eight-four, I will connect you," and connect subscriber with correct number.

2. PARTY LINE PREFIXES.

The following list shows the ten-party prefixes in the exchanges having such service:

* * * * * *

Humboldt, Douglas, Calumet, Yards, Canal, Edgewater and Kedzie numbers above 6,000, and Hyde Park numbers above 5,000 are ten-party lines.

West office has a special prefix for four-party lines called Ashland.

3. SPECIAL NOTICE.

"Under no circumstances must an operator handle the uninsulated metallic tip of the plug, as a disregard of this rule may lead to the receipt of a shock from the ringing current.

In making connections and disconnections, operators must handle the plug by the shell, taking hold of the cords only when it is absolutely necessary to do so in restoring them to their normal positions."

LESSON 3.

1. DESCRIPTION OF A "B" CONNECTION:

(1) When an "A" operator in an exchange receives an order for a number in another exchange, she closes listening key.

(2) and depresses call-circuit key to exchange wanted (being careful not to break in on the order wire), thereby connecting her operator's set with that of the "B" operator's set in the distant exchange, and gives number called for.

(3) "B" operator assigns "A" operator a trunk line number, and

(4) "A" operator releases order wire key,

(5) and opening listening key,

(6) tests trunk line assigned; if no sound is received

(7) she inserts the plug in a trunk line jack,

(8) and closes the listening key.

(9) When called party lifts receiver off the hook of telephone, the outside supervisory lamp goes out, both lamps remaining out while parties are talking. When both parties are through talking and hang receivers on hooks again, this action throws a light on the "A" operator's disconnect signals, who will disconnect by taking down her inside cord first, and then the outside cord; the act of taking down the outside cord or removing it from the trunk line assigned throws a light on the "B" operator's disconnect signal, who will disconnect by taking down her trunk line cord and restoring it to its regular position.

Operator will always disconnect when she receives the signal on the inside lamp, or both, but will not disconnect if only the outside lamp lights up.

If "B" operator can't be heard, "A" operator will say, "Repeat, one-two-eight."

If "A" operator is assigned a busy trunk line number, she will give order over again; if the same trunk line number is again assigned, and still tests busy, operator will depress order wire key and say, "Two-eight tests busy, four-five-eight," giving the number that was called and report to supervisor.

On a call for a neighborhood exchange or for Aldine, Haymarket, Midway, Lawn-dale, or Ashland, the operator must be sure to give both the prefix and number wanted on the order wire.

2. BUSY-BACK SIGNAL:

The "Busy-back" signal is a continuous buzzing sound accompanied by a flashing cord lamp which the "B" operator in a distant exchange gives to the subscriber when he calls for a number in her exchange that is busy. She inserts the plug of the trunk assigned in a jack located in the lower part of her board called "busy-back" jacks, which are equipped with this continuous buzzing sound, that automatically lets a subscriber know the line is in use.

If subscriber fails to understand or asks what the "busy-back" signal is, operator will remove connecting cord and say, "That sound is the busy signal."

LESSON 4.

1. DELAYED CONNECTIONS:

When there is a delay of any kind on a connection, operator will say to subscriber, "Just a moment, please, I am trying to get the connection for you," and report delay to supervisor at once.

2. A LOCAL "CAN'T RAISE":

When operator has a "local" connection on her board and outside supervisory lamp remains lighted a minute or more, she will say, "Central one-two-eight I will ring them again," and do so; if after another minute or more the outside lamp is still lighted, she will say, "Central one-two-eight, does not answer." If subscriber insists that they will answer, say, "I will ring them again," then change the cords and ring again. If they answer O. K. on the second pair of cords, the first pair will be reported to supervisor for test. If still no response say, "Central one-two-eight, does not answer," and if subscriber is not satisfied, refer to supervisor.

3. A "CAN'T RAISE" IN ANOTHER EXCHANGE:

When operator has a connection on her board to another exchange, and connecting cord supervisory lamp remains lighted about a minute, showing that the called party has not answered, operator will go in on connection, and if ringing induction is heard, she will leave connection and say nothing, and will not request "B" operator to ring, but will wait another minute and if supervisory lamp still remains lighted, "A" operator will say, "Main one-two-eight does not answer."

If subscriber is not satisfied, refer him to supervisor.

If ringing induction is not heard on the trunk, she will say to the subscriber, "I will ring them again," and then go in on the circuit and say to the "B" operator, "Ring—— (subscriber's number) on——" (trunk number).

If operator has forgotten the number called she will say to the subscriber, "What number did you call, please?" then repeating "I will ring them again," and give this order over the circuit as noted in above paragraph, waiting on the circuit for the "B" operator to reply "Yes" to the request.

If ringing induction is not then heard, the "A" operator will go in on the circuit, ask the "B" operator to "Change——on——," and "A" operator will also change her cords.

If called party answers, or ringing induction is heard on the second trunk, the cords and the first trunk used must be reported to supervisor for test as "No ringing induction——," giving number and prefix of party called, as well as trunk number.

If the called party does not answer and ringing induction is not heard on the second trunk, the connection will be referred to the supervisor.

If the called party does not answer and ringing induction is heard on the second trunk, the operator will report a "Can't raise."

4. REPORTING "CAN'T RAISE":

"Can't Raise" should not be reported in less than one and a half minutes.

5. RINGING INDUCTION:

If subscriber wants to know what the ringing induction is, "A" operator will say, "That sound is the ringing signal."

LESSON 5.

1. BUSY TESTS:

When an "A" operator gets a call for a number in her own exchange, she strikes the outer ring of the multiple jack of number called three times, resting on the last stroke; if a loud click is heard, she knows the line is in use, and will say to calling party, "Central one-two-eight is busy."

2. FLASH SIGNALS:

When a supervisory lamp flashes, the operator will, at once, cut in on the connection and say: "What is it, please?" If called party wants a number, operator will say, "Please signal your operator," and then disconnect.

If the calling party asks for a number, which the operator recognizes as being the same number as previously called, she will repeat order back and say: "I will ring them again." The operator, if she does not know, will repeat order back and say: "Is that the same number?" If it is, operator will follow through as the original connection.

Connections will be followed up as previously outlined under "can't raise" reports, the operator being governed by the ringing induction in re-ringing same number, request for a different number to be treated as new calls.

When subscriber flashes and notifies the operator that he has been given a wrong number, operator will say, "What number did you call, please?" repeat order and call number given.

Flash and disconnect signals should always be cared for first, as an operator is supposed to take care of and complete but one connection at a time, and she is the only operator who can answer her flash signals, while the operators on either side may answer the line lamp signals, or if the latter are busy, supervisor will come to her assistance.

Should subscriber flash while operator is engaged, operator will go in on line in answer to flash signal, and say, "Just a moment, please," complete first connection and then answer the flash signal by phrase, "What is it, please?" and handle as above.

3. MANAGER CALLS:

If the calling party asks for the manager, operator will say, "Manager," call supervisor and insert the corresponding outside cord in supervisor's jack. Should supervisor be unable to answer at once, operator will say, "Manager, just a moment, please."

If the calling party asks for the manager of another exchange, operator will repeat, "—— manager," repeating office asked for, press order wire key to exchange wanted, and say, "Manager," connect subscriber by using trunk assigned.

If the called party asks for the manager, refer him to supervisor by handing her the corresponding inside cord, but if called party asks for the manager in another exchange say, "Please signal your operator," and then disconnect.

LESSON 6.

1. AUXILIARY LINES:

When a subscriber has more than one telephone and wishes to have calls put on any one of the lines when the number called for is busy, they are specially marked in the subscriber's multiple, so that operator will test all of them before reporting a "busy" to calling subscriber.

When a subscriber's auxiliary line jacks touch each other they are called "grouped" auxiliaries and are marked with a red or white painted line underneath the jack.

When the auxiliary line jacks do not touch each other they are called "scattered" auxiliaries, and are marked with yellow or green paint underneath the jacks.

If subscriber has two or more lines and they all test busy operator will say, "Central one-two-eight, all lines are busy."

2. MEASURED RATE AND FLAT RATE SERVICE:

A measured service line is one on which subscriber is charged for each completed "out-going" call, made from that line, a record being kept by the "A" operator.

A flat rate line is one on which subscriber can make as many calls as he likes, no record being made of them.

When the figures at the right of auxiliary lines in subscriber's multiple are painted green this indicates that the lines so marked are measured service lines.

Some subscribers have both measured and flat rate service lines used auxiliary to each other and wish their "incoming" calls put on their measured service lines, when they are not busy, so that the flat rate lines will be free for "outgoing" calls as much as possible. When a call is received for such numbers operator will test the measured service lines first before testing other lines and when measured service lines are not busy will complete connections on them before using the flat rate ones.

3. ANSWERING JACK MARKINGS:

Red paint around answering jack means "special service;" operator will refer to list on board.

Yellow paint around answering jack means long distance terminal, subscriber to be connected with long distance trunk line without being answered.

4. DIRECT TRUNK LINES:

Trunk lines that are underlined in green paint, operator will test in the usual way and when an available one is found insert plug and give one short ring.

Trunk lines that are underlined in red or black paint operator will not ring.

Operators will not ring on long distance trunk lines.

Operator will always allow subscriber to give his own order to second operator.

5. DISTRIBUTING CALLS:

When operator and those on either side of her are too busy to answer a call signal supervisor will transfer call to an operator who is not busy, saying, "Take central 500," or whatever the number is. Operator will take inside cord, insert it in multiple jack of number given her and complete connection on outside cord, the same as if connection has been made from an answering jack.

6. HALF CONNECTIONS:

Operator must not put answering cord in answering jack until she is ready to serve calling party. This is called "holding on a half connection."

When more than one lamp lights up at the same time operator must complete one connection before taking another.

LESSON 7.

1. FALSE CALLS:

Mistakes are sometimes made in calling numbers, then discovered before the called party answers, the calling party disconnecting to obtain correct number. This brings the called party to the telephone when he is not wanted and these cases are known as "false calls."

He usually asks who called him and operator will say, "I'm sorry, we rang your bell by mistake."

If he still remains at the telephone, operator will say, "There is no one on your line now," following this with "Please hang up your receiver," should subscriber not hang up promptly.

Should subscriber make further complaint and fail to hang up receiver, refer him to the supervisor.

When an operator rings a number by mistake, she will remain in on the line and say, "I'm sorry, we rang your bell by mistake."

When calling party hangs up receiver, just as party answers, operator will say to called party, "I'm sorry, the party who called has disconnected."

2. CUT OFFS:

When a subscriber has been disconnected from a party he has been talking with before they are through with the conversation, this is called a "cut off."

On complaint of a "cut off," operator, if she handled the original connection and remembers the number, will attempt to reestablish the connection.

If she has forgotten the number she will say, "What number did you call, please?" Repeating order back, she will proceed as above.

On complaint of cut off, if operator has not had the original connection she will say, "Did they call you?" If reply is "yes," she will say, "Please hang up your receiver and give them a chance to call you again." If subscriber still remains at the telephone refer him to supervisor.

Should response be, "No, I made the call," operator will say, "What number did you call, please?" If from a flat rate telephone, operator will complete connection.

If the number tests busy, refer case to supervisor.

The restored connection should be carefully supervised to see that conversation is not interrupted a second time.

LESSON 8.

1. PERMANENT SIGNALS:

When a line and pilot-lamp signal light up and operator says, "Number, please," twice without getting any response, she will change her cords and say, "Number, please," again. Should she still get no response, line will be considered out of order and will be referred to hospital operator by pressing order wire marked "H. O." (hospital operator) and say, "One-two-eight permanent," giving number that is permanent. If a two-party line, operator will give both numbers. If a ten-party line, operator will give the circuit number. If a four-party line operator will give in circuit number and a station number as directed in each office, or all numbers.

2. HOSPITAL AND IRREGULAR CALL POSITION:

This is a switchboard position, especially equipped for handling lines which are out of order and irregular calls of various kinds, which for one reason or another the operators are not able to complete direct.

All calls for lines on which the "out of order" or "question" tests are noted, all calls for lines plugged, which operator can not complete, are referred to this position.

3. OUT-OF-ORDER TONE TEST:

The hospital operator has special cords for use on lines that have been reported permanent. The plugs of these cords have a continuous humming sound called "Out-of-order tone test," which, when plug is inserted in subscribers' multiple jack of line that is out of order, throw this tone on the rim of the jack throughout the board, so that operator getting a call for a line that is permanent will get this tone when testing the line. Instead of completing the connection, she will transfer the calling party to the hospital operator over special trunks provided for this purpose. Hospital operator will notify calling party that the line is out of order.

When a subscriber has two or more lines and one is out of order, having the tone test on it, and the other busy, operator will say, "Central five-eight, all lines are busy."

4. INFORMATION POSITION:

This operator will furnish information concerning telephone numbers that do not appear in current issue of directory or that subscribers can not find for any reason. Supplementing the regular directory, there is issued a daily bulletin, containing number and name of new telephones installed, change of number, etc. This bulletin covers all changes made prior to 3 o'clock of the date of issue.

5. QUESTION TEST:

This test is a light buzzing noise similar to the "busy-back signal" and is found usually on auxiliary lines. When this test is heard operator will connect calling party with information position.

SPECIAL NOTE:

Operators must never ring on hospital or information lines.

LESSON 9.

1. TELEPHONE-OUT-OF-ORDER COMPLAINTS:

DAY.

When a subscriber complains of his telephone being in trouble between 7 a. m. and 5 p. m., operator will say, "I will connect you with the repair department." Operator will then test the repair department's lines and, when an available one is found, complete connection.

Sundays and holidays, repair desk is covered from 8 a. m., to 5 p. m.

If subscriber complains of his telephone being in trouble during the evening, refer him to supervisor.

If a subscriber from another exchange reports his telephone out of order refer him to supervisor.

2. OVERFLOW REPORTS:

An overflow report is what the "B" operator in a distant exchange gives the "A" operator, when all of her trunk lines are in use; the "A" operator will try all call circuits to that office and if trunks are all busy will wait ten or fifteen seconds and then give order again in same manner.

If a second overflow report is received, operator will say to subscriber, "All lines to — office are in use," and should he not hang up, add, "Please call a little later."

Operator will report overflows to supervisors by saying, "Overflow on main," or whatever office it may be.

"Generator gone"—phrase used by "B" operator when ringing current is in trouble. "A" operator will say to subscriber, "We are unable to ring — numbers, please call again."

LESSON 10.

1. MESSENGER SERVICE:

Subscriber wishing to make inquiry regarding messenger service must be connected direct with the messenger office, operator using the phrase "I will connect you with the messenger department," giving him Main 152. Calls for messenger boys will be handled according to special instructions in the various offices.

2. TOLL SERVICE:

1. When a subscriber signs a contract for telephone service he specifies whether he wishes connection with long-distance points or not. If he does, he is said to have toll service; if he wishes only city connections, he is known as a "no-toll" subscriber. Calls for long distance or long-distance points from a toll subscriber are placed on the long-distance trunks.

2. If a "toll" subscriber calls for one of the express points, which are Oak Park and Evanston, order will be given over Main call circuit, except in Central and Harrison, where special express trunks are used.

3. Should a "toll" subscriber ask to have charges reversed connect him with long distance, except the express points, which will be connected as per paragraph 2.

4. If a "toll" subscriber calls for long-distance manager, or chief operator, connect him with long distance.

5. If a "toll" subscriber calls for an operator by name of State or town, connect him with long distance.

6. Should a "toll" subscriber want to know the charges to any long-distance point, connect him with long distance, except the express points, which will be connected as stated in paragraph 2.

7. Should a "toll" subscriber complain of being cut off from the Buffalo operator, or any operator by name of State or town, connect him with long distance.

8. Calls for operators by numbers 1 to 100 or for operator 850 are put on long distance; calls for any other operators by number are referred to supervisor.

LESSON 11.

1. "NO TOLL" SERVICE:

(1) A subscriber who does not want long distance connections has his line-lamp marked with a red opal.

When a subscriber calls from a line marked with red opal for long distance, operator will say, "Toll connections are not allowed from this telephone."

Any complaint or question about long distance should be referred to supervisor, when made from a "no toll" telephone.

2. OVERFLOW POSITIONS:

This is a position in which are duplicated the subscribers' line-lamps and answering-jacks of another position, and is used only when the work in the regular position is too heavy for regular operator. A green opal marks the lines which are duplicated in an overflow position.

3. IDENTIFICATION OF OPERATOR:

If an operator is asked for her name, she is to say, "I can't give my name, but my number is ———."

Operator must always give her number when requested.

LESSON 12.

1. POLICE CALLS:

When a subscriber asks for—

- (1) Police department or "police,"
- (2) A police station,
- (3) Main 13,
- (4) Chief of police,

operator will say, "Do you want to give a police alarm?" If response is "yes," operator will connect subscriber with nearest police alarm wire, as per instructions to be given in each office, calling the order over the circuit as "police alarm," supervise and report facts to supervisor.

If response is "no," operator will say, "Have you referred to your directory?" and if he has not, she will add, "Please do so." If he states he can not find the number, he is to be referred to the information operator, saying, "I will connect you with the information operator."

If subscriber comes to telephone and shouts "police" and leaves telephone again, operator will refer subscriber's number to supervisor at once; if a two or four party line, give all numbers; if a ten-party line, give number of circuit, plug not to be removed from answering jack until number is referred to supervisor.

2. FIRE CALLS:

When a subscriber asks for—

- (1) Main 0,
- (2) Fire department or shouts "fire,"
- (3) Chief of fire department,

operator will say, "Do you want to report a fire?" If response is "yes," give order over main order wire as "0," connect subscriber with trunk line assigned, supervise and report facts to supervisor.

If response is "no," handle as above outlined under police alarm instructions.

If subscriber wants to know where the fire is, operator will say, "We do not know." If he still insists or asks for Main "0" saying that they will tell him, refer him to supervisor.

If subscriber shouts "fire" and leaves telephone, operator will refer subscriber's number to supervisor at once.

If a two or four party line, she will give all numbers; if a ten-party line, she will give number of circuit, plug not to be removed from answering jack until number is referred to supervisor.

Fire calls originating in Hyde Park, Oakland, Wentworth, and Yards offices will be given over Wentworth order wire as "0," supervise and report facts to supervisor.

LESSON 13.

1. CALLS FOR OFFICIALS OF THE COMPANY:

Calls for president, general manager, general superintendent, superintendent of traffic, and other officials, for the contract or other departments of the company will be referred to Main 294. Calls for manager, chief operator or wire chief of any office are put through without question.

Calls for others than these refer to supervisor.

2. CALLS FOR CONNECTIONS BY NAME INSTEAD OF NUMBER:

If subscriber asks operator for the name or number of a certain party, she will say, "Have you referred to your directory?" If he says "No," she will say, "Please do so;" if he replies that he can not find it, or if he asks for a new telephone, she will say, "I will connect you with the information operator," and do so.

If subscriber has not time to look number up,—refer to supervisor.

3. CALLS FOR SUBSCRIBER'S AGENT:

On calls for subscriber's agent, operator will say "Subscriber's agent," and complete connection on Main 294.

4. SUBSCRIBER'S RIGHT OF WAY:

If called party wants a number before talking to calling party, operator will say, "There is a party calling you, will you talk with him?" If subscriber says "Yes" operator will say, "There is your party."

If he says "No," and asks for another number, operator will say, "Please signal your operator," and disconnect, at the same time saying to calling party, "Your party is calling another number."

If called subscriber has auxiliary lines, operator will test them and if one is available, complete connection.

5. CALLS FOR LOCAL NUMBERS:

All calls for local numbers, as for example, Local 128, operator will say, "What exchange, please?"

6. PRIVATE EXCHANGES:

Private exchange means the subscriber has a private switchboard on his premises, attended by a private operator, and has trunk lines extending to the nearest telephone exchange.

7. HOW TO HANDLE CALLS FOR PRIVATE EXCHANGE NUMBERS:

Calls for private exchange numbers from 1 to 320, will be given over central order wire, both prefix and number to be given over the circuit.

LESSON 14.

MISCELLANEOUS INSTRUCTION:

When a call is received from a two or four-party line for a number in the same exchange, operator will look at number plate or chart to see if number called is the other party on this line. If so, she will say, "Please hang up your receiver for a moment," and will then ring called party in the multiple. When they answer let them talk on the same cord in answering jack.

Calls for the health department are put on Main 447.

Operator receiving request for a directory will refer calling party to supervisor.

Call for the collection department will be given Main 294.

Should subscriber ask operator to ring his bell, operator will ask, "What is your number, please," and on getting it will say, "Please hang up your receiver for a moment," and when disconnect signal is received she will ring back on line, making connection through the multiple.

Call for chief operator in another exchange will be given over the calling circuit as "Manager."

Call for the wire chief in another exchange will be given over the calling circuit as "Wire chief."

Should subscriber ask for hospital operator, refer matter to supervisor.

Should subscriber ask for the information operator in another exchange, connect him with the information operator of the division.

Should operator receive a request from a subscriber asking for the panel and jack number or with a request, "What line," she will look at the answering jack and give the information wanted.

If subscriber flashes and asks for a better connection, operator will say, "Just a moment, please," change cords and say, "There is your party." She will refer first pair of cords to supervisor. If on a "B" connection she will change her cords and ask "B" operator to change the trunk, reporting first cords and trunk to supervisor.

LIBRARY OF CONGRESS



0 019 566 902 8